

ATHLETIC JOURNAL

Vol. XXVI, No. 7

March, 1946



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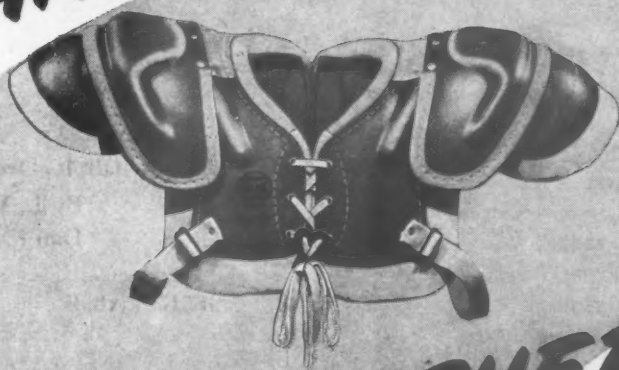


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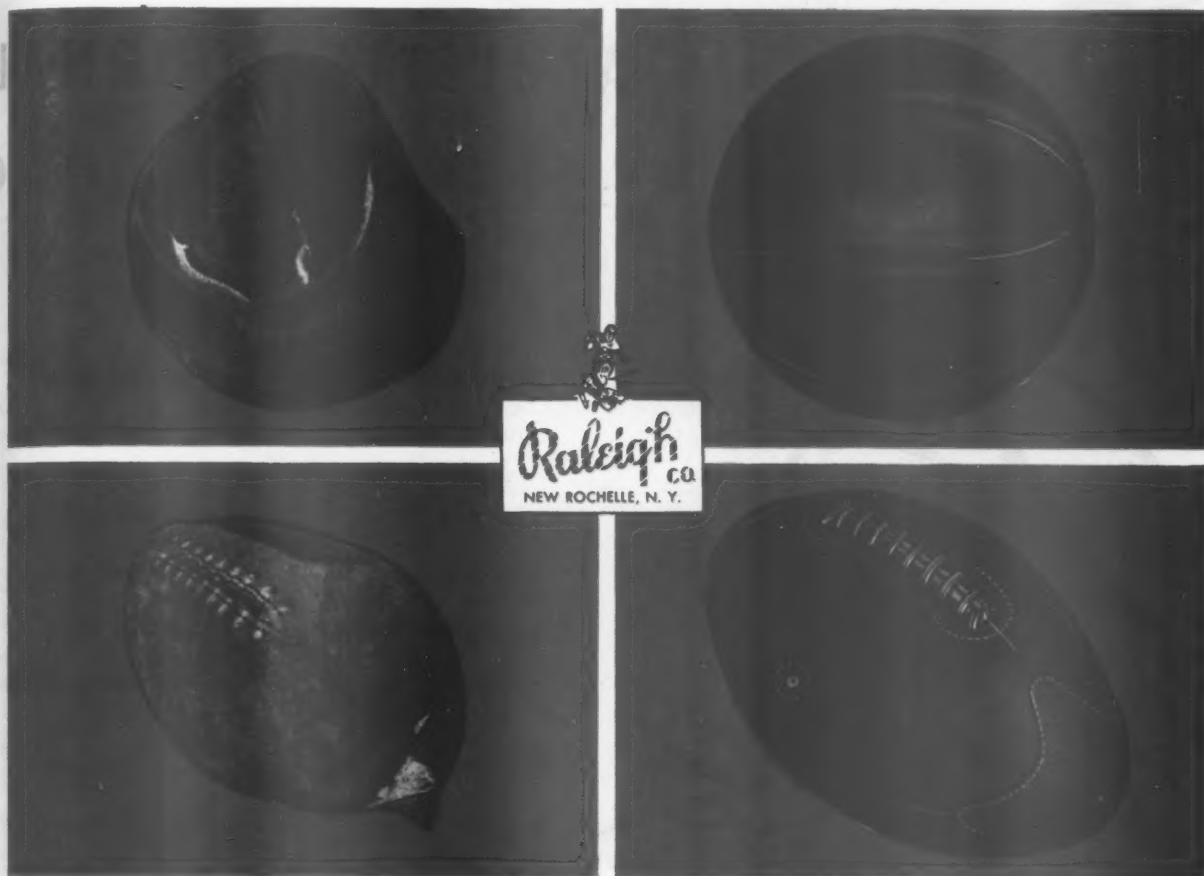
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from here and there - - -

HHEAD coach at St. Patrick High School, Kankakee, Illinois, A. M. "Bud" Monahan has been appointed director of the recreation program of the Kankakee Park Board. His new duties will be in addition to coaching . . . Roy Clifford, basketball coach at Western Reserve University, Cleveland, is directing his team for the first time since 1942 when he entered the navy.

CCHARLEY BAER, head football coach at the University of Detroit is spending his spare moments perfecting his invention to measure the football aptitude of prospective linemen. His device is the outgrowth of instruments utilized in physical education studies to measure muscular fatigue. Speed, strength, and size, plus reaction time, is Coach Baer's formula to measure line candidates. His reaction device consists of three blocking dummies, a recording disc, and an awesome amount of electrical equipment. This is the way it works: A defensive lineman takes his stance opposite the center dummy. When the ball is snapped, the time is automatically recorded on the disc. At the snap of the ball, the lineman makes his initial charge, and contacts the center dummy. The time is recorded, the lineman recovers, and moves toward the right or left dummy, depending upon the direction of the ball carrier. Time is recorded, as he makes contact with the second dummy. The lapse of time between the snap of the ball and the first contact is termed the player's initial reaction time. The lapse of time between the first and second contacts is called the player's recovery time. Players with the best recovery time, plus speed, strength and size are considered the best prospects.

THE Boys' Athletic School of Baltimore, Maryland, had an undefeated six-man football team in 1945. The team scored 431 points in nine games. Five of the football team make up the school's basketball team, and the sixth is a member of the basketball squad . . . L. J. "Skinny" Reeves is the new Voit Rubber Corporation sales representative for Texas, Oklahoma, Southern Kansas, southwestern Missouri, Arkansas, and Louisiana. Mr. Reeves, will make his headquarters in Dallas.

THE Chicago Sports Association, under the direction of Harry Berz, its secretary, conducted a six-week basketball clinic for Chicago youngsters. More than 3,000 registered, and 94 per cent of this number completed the full clinic.

ONE of the select group of major league pitchers credited with winning 200 games, Earl Whitehill, has joined A. G. Spalding & Bros. as a special baseball promotion director. . . . Paul "Bear" Bryant, Kentucky's new football coach, has completed his staff. Lew Bostick, former Alabama lineman, who served as assistant to Bernie A. Shively last year, before Mr. Shively retired from football to be athletic director, has been named as one of Coach Bryant's assistants. Other members of the coaching staff came from the University of Maryland. They are Frank Moseley, formerly a coach at Kentucky, Carney Lasie, former Alabama star, and Kenneth Whitlow, former All-American center at Rice.

ALLOCATION of not more than fifty tons of rubber monthly for golf balls is a possibility, Charles F. Robbins, president of A. G. Spalding & Bros., Inc., told stockholders of the company at a recent annual meeting. A early return to natural runner golf balls will follow public demand, he predicted. There is less pressure for a return to natural rubber for tennis balls, according to Mr. Robbins. . . . L. E. Coleman, president of the Golf Ball Manufacturers Association, stated that most of the crude rubber would be used for golf ball thread, and that it was the consensus that crude rubber golf balls would not be available until at least June.

FILM strips, motion pictures, and other visual aids, long ago recognized for their instructional value in athletics, and in wide use, especially by football coaches, have been cited as essential to better teaching by Maxwell S. Stewart in *The Need for Better Schools*, a summary of the findings of a number of leading educators.

HUGH DEVORE, coach of Notre Dame's football team during the past season, has signed a three-year contract to coach at St. Bonaventure College, Olean, N. Y., . . . Cornell, through contributions of alumni and friends of the university, will have a new \$200,000 athletic training building. The project, which is to start this spring, will be named in honor of Jack Moakley, eighty-two-year-old track and cross-country coach. The building will provide sleeping quarters and a dining room for sixty members of visiting teams, bedrooms, and lounges for visiting coaches, training tables for Cornell teams, a main lounge, and a trophy room. Coach Moakley, now in his forty-seventh year of active coaching, has brought Cornell ten intercollegiate track and field championships, and sixteen cross-country titles.

(Continued on page 42)

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SINCE 1875—Leading the Way in Sports and Play



The Modern

FORMATION

By Clark D. Shaughnessy

Head Football Coach, University of Maryland

THERE has been a great deal of talk of late about defense catching up with the T formation. Skeptics point an accusing finger at the unhappy three-year record of my teams at the University of Pittsburgh, demanding: "Explain those failures, if you can."

There has been growing criticism also of the T formation as being too intricate and too exacting for high school boys, and for some college boys. "They just can not learn all those fancy maneuvers," a number of coaches have complained to me.

To all the complaints, I have one answer—"You are right, and you are wrong."

Defense is catching up with the T formation employed by many colleges and high schools, *but* the T formation which is being stopped is not the modern T. And, boys are having difficulty learning what is required in the execution of the T formation, not in the execution of the modern T.

The T being stopped today is the T which was in vogue when I played football at the University of Minnesota back in 1910-1913. At that time, all plays were launched from the simple set T, with the quarterback behind and under the center, and the other three backs in a line four or five yards directly behind him. The man in motion, and split lines had not yet been introduced, to any great extent.

In this simple set T, and with few exceptions in all other systems of attack except the modern T, plays were numbered, 1, 2, 3, or 36, 37, 38, etc., each signal affecting the assignments of all eleven players. Because each boy had to know a different assignment for each play, his capacity for learning and executing plays was seriously limited, and the coach, realizing this, had to boil his attack down to fifteen or twenty basic plays.

This easy and simple system worked beautifully against the then popular seven-diamond defense. Once the backs got through the line, they were going for yardage. That was because only one man was backing up the line, and feinting him out of position was not too difficult. It would still work today, if the defense eventually had not discovered that the maximum

number of plays which could be launched in this T was fifteen to twenty, and if the defense eventually had not become thoroughly familiar with these fifteen or twenty plays.



CLARK SHAUGHNESSY

Maryland's new head football coach, and leading exponent of the T. He has served as head football coach at Tulane, Loyola of the South, Chicago, Stanford, Maryland, and Pittsburgh.

This discovery led to experiments in defenses, and the six-two-two-one defense was introduced. The old set T now faced a serious problem. It had to fool two backers-up out of position. Because flexibility—the key to a successful offense—was totally lacking, it could not. The old set T was stopped, and gradually gave way to the box, single wing, and double wing-back formations. The T formation coaches fell out of grace with their superiors and the fans, and they fell out of jobs. With one exception, the T, as it was known back in 1910-1913, became virtually extinct.

The one exception was George Halas, owner and coach of the Chicago Bears. A firm believer in the T formation, he stuck

to it through thick and thin to become the father of the modern T.

And, what is the modern T formation?

Briefly, the modern T formation places emphasis on maneuvers from which plays may be launched, and not on a set number of plays themselves. As a result, its flexibility is enormous, its potentialities unlimited. Actually, a smart quarterback, like Frankie Albert of my 1940-41 Stanford teams, can "make up" plays on the playing field to meet any emergency. He is not handicapped, as under the old set T, and most, if not all of the other systems of offense, by having to call a play, designed for an expected defense, which has no chance to succeed because of variations in the defense.

This is why I consider the modern T formation the best offensive system by far. It is the only system in which new plays may be added constantly to meet whatever variations occur in the defense, and with no additional mental or physical labor because the eleven players have only to execute the modern T's ten to fifteen basic maneuvers, singly and combined, to spring literally thousands and thousands of plays.

Answered, then, is a question I am asked repeatedly: "How in the world can your boys learn so many plays? I can't get mine to learn twenty-five."

These basic maneuvers never affect more than two or three boys, usually at the point of attack, or acting as decoys. The other eight or nine boys follow their standard assignments. Because of this, there is less chance of improper play execution. Three boys can memorize easily the ten to fifteen basic maneuvers required of them in the T.

Another outstanding advantage of the modern T is its perfect balance. The same plays, requiring the same assignments, go right and left. In other systems, including the old, simple, set T, this is not true. If you have a set of long-side plays to the right, you have another set of long-side plays to the left. You have short-side plays to the right, and more short-side

(Continued on page 69)



To the Athletic Journal and 25 Years of Progress!

In our way of thinking THE ATHLETIC JOURNAL is a war memorial to its founder—the late Major John L. Griffith—a memorial created after the last World War.

For nearly 25 years the Major, through his everyday activities, faithfully served the cause of athletics whenever and wherever he was called upon to do so. His son carries on!

LONG LIVE JOHN L. GRIFFITH!
LONG LIVE THE ATHLETIC JOURNAL!



PEABODY, MASSACHUSETTS

for MARCH, 1946

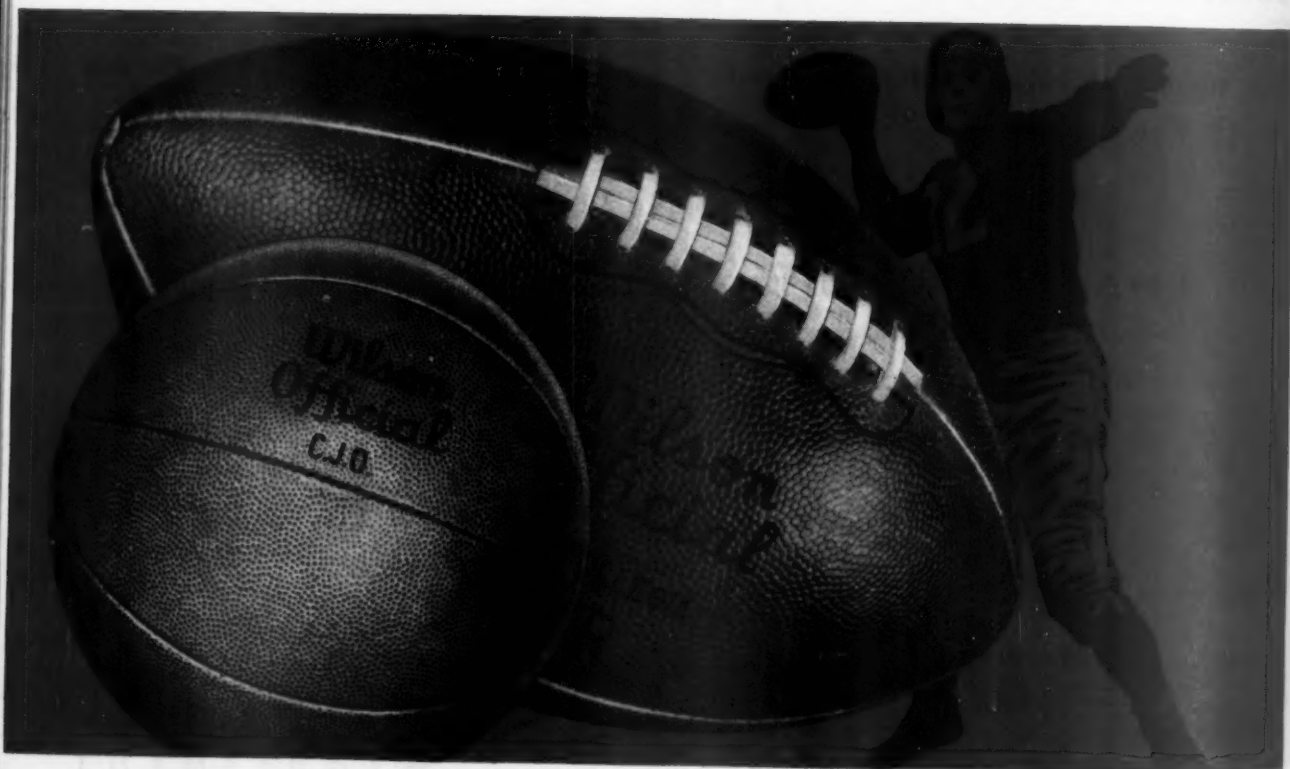
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—on the occasion of the 25th Anniversary
of a most worthy enterprise in the interests of
America's youth.

A Double Celebration

I We celebrate with you the 25th Anniversary of the birth of your Athletic Journal. We extend to you our heartiest congratulations on a job well done—on the part you have had in making American sports more important than ever before to the future greatness and success of this democratic nation. More power to you.



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The Single Wing

With An Unbalanced Line

By Carl Snavely

Head Football Coach, University of North Carolina

THE single wing with an unbalanced line, although not as old as the T formation, is one of the oldest formations in football. As in the case of the T, however, the offenses used from it have undergone vast changes and developments which continue up to the present day, and most of the coaches who use it are busily engaged right now in devising brand new variations and ideas which will add potency to the attack in the 1946 season.

I believe that this formation, originally, was one of the many products of "Pop" Warner's inventive genius, but it would be impossible for me to list the many coaches who directly or indirectly have aided in its development, for such a list would include practically all able coaches, from the beginning of football down to the present day, no matter what offenses they may have preferred for their own use. Prominent men on such a list would be Wally Stephen, Knute Rockne, Bill Alexander, Bob Zuppke, Hugo Bezdek, Jock Sutherland, Howard Jones, Bert Bell, Bo McMillan, Wallace Wade, Andy Kerr, Earl Blaik, Bob Higgins, Bob Neyland, Lou Little, Fritz Chrisler, Wallace Butts, Lynn Waldorf, George Munger, Harvey Harmon, Frank Thomas, Dick Harlow, Hooks Milan, and many others.

I have no desire whatsoever to sell the unbalanced single wing formation to any coach or to the public, nor do I wish to see more teams using it. I would cease using it myself on this very day, if I thought I had something better to use in its place. However, in view of the ballyhoo which some other types have been receiving, I believe that it would not be out of place to explain why I prefer it, and to mention some facts which might reassure some of the coaches who have been using this sound and versatile alignment, which has so successfully passed all the tests of time, fads, trends, rules changes, universal use, familiarity, and defensive developments, one which has kept pace with the most advanced ideas.

In my opinion, there is no formation in existence today which permits a wider or more effective exploitation of the best and most modern offensive innovations. No formation has been used by such a large number of outstanding and successful coaches. None has been used by so great a number of successful and outstanding teams. We know of a considerable number of coaches with brilliant records who

have faded into mediocrity or obscurity, after abandoning the single wing in favor of other offenses which they had observed or invented, and which at the moment seemed to offer great promise, as well as the attractiveness of novelty.

However, the development of the T formation has been a splendid thing for football, and a very good thing for the single

CARL SNAVELY, head football coach at the University of North Carolina, had a remarkable seven-year record at Bucknell. His North Carolina teams in the middle 1930's lost but two games in two years. He left North Carolina in 1936 to coach at Cornell, where his record was equally good. He returned to North Carolina last year.

wing, because use of the single wing was becoming so common that football was in danger of becoming standardized and uniform. Moreover, with the single wing dominating high school, college, and professional circles, the familiarity of coaches and players with its possibilities undoubtedly was a help to the defense.

The great expansion of the T formation, of course, has taken place during a period of abnormal, war-time conditions, and I believe that the single wing attack has been at a disadvantage during the past five years, when frequent changes in line-up, limited practice time, and new and constantly changing personnel have been the order of the day. The single wing attack is not simple. It requires a combination of skills, co-ordination, and familiarity which cannot be fully developed in a few weeks, or even during a single season. From my observations of the past several years, I should say that during this period, when sustained development has been out of the question and when coaches have been compelled to neglect fundamentals and individuals, it has been possible to develop at least a basic attack from the T formation more quickly than from the single wing.

Nevertheless, according to statistics which I have compiled, teams which have been using the single wing have on the whole averaged more points per team per game than the T formation teams in every one of the past seven years, and by greatly increased margins in the last two seasons.

In fact, such teams have averaged more points per game than any other teams, until this last season when terrific scores piled up by Alabama, Tulsa, and Tennessee, some against obviously weak opposition, coupled with the fact that there were but few teams using this type of offense, gave the "single wingers," from a balanced line, a higher scoring average. Until 1943, when the war caused discontinuance of publication of the seasonal records, by the American Football Statistical Bureau, ending any resemblance to normal football conditions, teams using the single wing and unbalanced line held all the records in ground gaining averages, per play, per game, and per season, by rushing, by passing and in total offense, as well as in percentage of passes completed.

There are sound reasons for this leadership, other than the widespread use of the formation. It has advantages in all phases of offense—rushing, passing, power, and deception.

It has been said that the single wing attack is nothing but a power attack. It is true that it provides power when power is needed, and some coaches have capitalized principally upon its potential power, but any assertion that it is necessarily lacking in other respects is not borne out by the records or facts. Many of the greatest forward passing teams in football history have used the single wing attack, including the Cornell team of 1940 which broke all existing records for passing proficiency, the Duke team of 1941, which established another new record, and the Georgia team of 1942, which had an even more potent passing attack.

It has been said that the formation lacks power to the weak side, but all of the fine single wing teams that I have faced, or that I have seen, have had strong and dangerous attacks to the weak side. Those which have failed to develop a weak side attack have failed to emphasize such plays, or they have failed to make use of the best possible blocking combinations. My own records show that, year in and year out, our weak side plays are among our most effective maneuvers.

It has been said that the single wing formation requires heavier and more rugged material, but I have not found this to be true. As a matter of fact, the two best teams that I have had were the lightest teams that I have coached in college football, but they were made up of boys who had spirit, brains, skill, and speed. All the fullbacks on these teams weighed less than 165 pounds. The powerful Dartmouth teams of 1936, 1937, and 1938 were not heavy teams. They were built on speed. Several of the most powerful Pitt teams of the Jock Sutherland era were light teams paced by such lightweight backs as Jimmy Hagen, Howie O'Dell, and Gibby Welsh. Many of the most successful players that I have seen

(Continued on page 52)

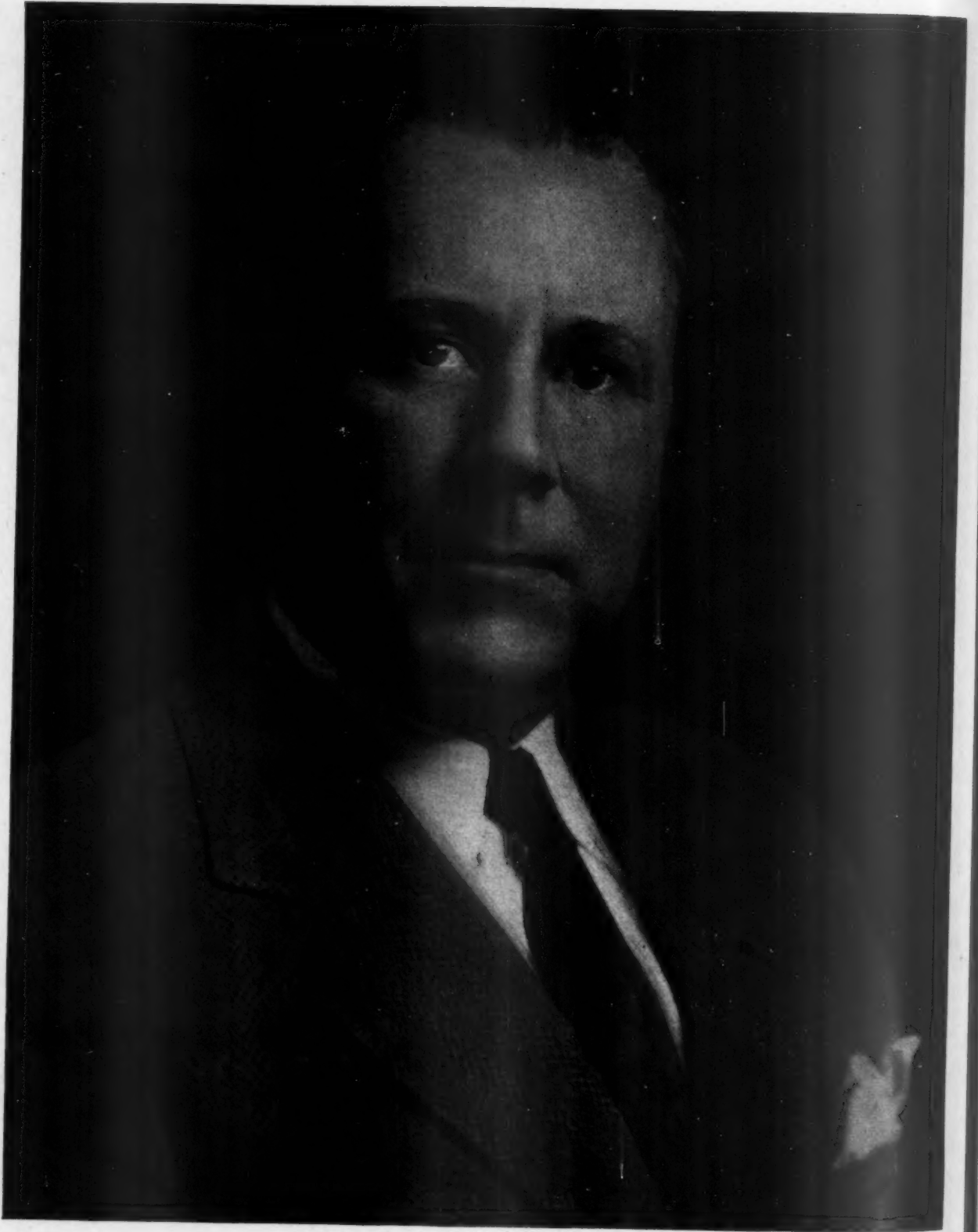
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JOHN LORENZO GRIFFITH

IN MEMORY OF
JOHN LORENZO GRIFFITH

Who, as President of The Athletic Institute, Secretary-Treasurer of the National Collegiate Athletic Association, Commissioner of the Western Conference, Vice-Chairman of the Sub-Committee on Athletics of the Joint Army and Navy Committee on Welfare and Recreation, founder of the Athletic Journal and through his lifelong devotion to the advancement of sports and recreation, contributed greatly to the strength and welfare of the nation.

Theodore P. Bank

President, The Athletic Institute

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THE ND OTRE AME SYSTEM

Its Development and Variations

By Charles W. Bachman

Head Football Coach, Michigan State College

OFFENSIVE formations will come and go, but the Notre Dame formation will go on forever.

In my opinion, it will survive because this style of football combines the three essentials of a close formation system of play—speed, deception, and power. It also makes possible the quick kick, and a passing formation, which I believe is the best in football.

I purposely have refrained from calling it the Notre Dame shift, because I believe the shift part of the offense has lost its effectiveness. Since the backs always shift to the same position, and since the rules committee added the one second stop to shift formations, it legislated our type of shift out of the game. Recently, some people have referred to it as the "Harmless Hop." At Michigan State, we have learned that by eliminating the shift, we require 200 more feet of film each game, which, of course, means more offensive plays.

Historically, there seems to be some difference of opinion as to whom should get credit for originating the Notre Dame shift. One group of old timers at Notre Dame credit its origin to the late Frank Cavanaugh of Dartmouth. Jack Marks, according to this group, brought the box formation with him, when he assumed the coaching duties at Notre Dame, prior to the advent of Jesse Harper. Another group credits its origin to Alonzo A. Stagg, claiming that Jesse Harper brought it to South Bend when he took up the coaching reins dropped by Marks in 1913. Probably, that question will never be settled. Un-



Bachman

State. In the accompanying article, he outlines the history of the Notre Dame system of play, its developments and variations.

Charles W. Bachman, head football coach at Michigan State College, was graduated from Notre Dame in 1917. He coached successfully at Northwestern, Kansas State, and at the University of Florida before coming to Michigan

doubtedly, both groups contributed something to the formation. A great deal of the credit should go to Jesse Harper. His offense that year consisted of a series of plays from a balanced line, T formation, combined with a shift right and left to the box formation. This was the first time a complete series of plays had been run from this formation, and it was the beginning of the Notre Dame shift, as we know it.

It was my good fortune to have been a freshman at Notre Dame the year Jesse Harper came to South Bend from Wabash to be director of athletics, and coach of all major sports. His team that year had such well known players as the immortal Knute Rockne, Gus Dorais, Ray Eichenlaub, and Mel Edwards, to mention a few whose names are indelibly written on the pages of Notre Dame football. This team used the Notre Dame shift, and it made

football history by defeating the heavily favored Army at West Point, 35 to 13, in a game won mainly through forward passing, a game which demonstrated effectively the possibilities of this comparatively new offensive weapon. The passes were thrown by Gus Dorais, from deep punt formation.

The box formation that year featured a combination of indirect and direct pass plays. On the quarterback plays, Dorais fed the ball to Eichenlaub, the fullback, and on the direct pass plays the ball went through his extended hands to the tailbacks. Diagrams 1, 2, and 3 illustrate plays of this type.

In 1914, one of our opponents shifted the ends. In Spring practice of 1915, Knute Rockne, now an assistant to Harper, experimented with the idea, and finally worked out the technique and timing with the backfield shift. The end shift became a part of the offense that fall. In the years that followed, this one innovation had much to do with the success of our offense. While officials were sharpening their sights to catch the backs in motion, the ends were doing great damage. Bill Roper of Princeton, realizing the situation, said: "Forget the backs, and watch those ends." Bill dropped his strong-side tackle off the line, so the fast flexing end could not get quick contact. This defense later became known as the "Butterfly" defense.

In our 1915 game with the Army at West Point, we enjoyed great success in the first quarter by running the off tackle play with Stanley Cofall, our left halfback,

(Continued on page 80)

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Nation-Wide Amateur Athletics

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FRANK M. RICHARDSON
Editor

The First Twenty-five Years

WITH this issue, the ATHLETIC JOURNAL begins its second quarter of a century of service to amateur athletics. It is with a feeling of justifiable pride, that we offer our thousands of readers a silver anniversary issue containing authoritative articles, dealing with the past, present, and future of such sports as football, basketball, baseball, track, and swimming, a resume of athletic training, and articles covering the growth and administration of interscholastic athletics.

The ATHLETIC JOURNAL was founded in March, 1921, by the late Major John L. Griffith, former Commissioner of Athletics in the Big Ten Conference, and founder of the Drake Relays, to foster the spread of athletics, and to raise coaching standards. Without exception, the editorial policy of the Journal has stressed the highest ideals in athletics, maintaining that athletics, worthwhile in their benefits should be a definite, important factor in the educational program.

From a modest beginning, the Journal, through reader interest and approval, and advertiser support, has grown to its present position of leadership in the field of amateur athletics. The founder's aims, set forth in the following editorial which appeared in the first issue of the Journal, were achieved long before his death, yet their continuance is a goal which requires constant effort:

"This issue of the ATHLETIC JOURNAL is the first announcement of the publication of an athletic magazine for coaches and players. The world war demonstrated the value of athletics in the life of the nation; the number of men engaged as athletic instructors is increasing; athletic coaching is now recognized as a dignified profession.

"The publishers of the Journal believe that a magazine, which will disseminate information rela-

tive to athletics, is needed. They believe that there should be at this time a medium through which coaches may exchange ideas and students of athletics may receive discussions pertaining to the leading athletic sports.

"There are already in the field athletic periodicals written for popular use; much very valuable literature relative to the general subject of Physical Education has been compiled. The ATHLETIC JOURNAL is intended primarily for athletes and coaches of high school and college. It is our purpose to deal almost exclusively with one phase of physical education—athletics. We believe that both players and coaches are concerned not so much with news items as with the fundamentals and technique of the major sports. A number of the leading men in athletics in the United States have been asked as contributory editors to lend their assistance to this enterprise. Their names will be announced later.

"The first issue is a modest beginning, but it is hoped each succeeding number will become more pretentious. The April issue, already in preparation, will be an official publication of the Revised Track and Field Rules issued by the National Collegiate Athletic Association. As these rules will be used by the Association, which comprises all the leading colleges in the United States, at its first great national meet in June, the publishers of the Journal are glad to give over the entire issue to the publication of such important and at this time necessary rules.

"The editors of this magazine will strive for the improvement and betterment of athletic sports in the colleges and schools of the United States. The co-operation of 12,000 athletic coaches, whose work at this time is of such vital importance in reshaping civilization is most heartily solicited."

During the past twenty-five years, the Athletic Journal has used 11,990 pages to publish 3,191 articles, illustrated by 12,906 pictures and diagrams. The articles, written by authoritative high school and college coaches, athletic directors, trainers, and administrators, were in the following classifications: technique, 58 per cent; research and philosophy, 24 per cent; facilities and equipment, 7 per cent; psychology of the participant, 6 per cent, and health and safety, 5 per cent.

Journal readers realize, of course, that they are indebted beyond measure to the Journal's advertisers whose paid space each month, throughout twenty-five years, has made it possible to obtain and publish the aforementioned articles, pictures, and diagrams. In addition to presenting comprehensive, technical articles on the various sports—in order to provide an exchange of information, and to be of assistance to less experienced and new coaches—the Journal has arranged for the assistance of seventeen information editors, to answer the specific questions of its readers; it provides a book review column to digest new books on sports; it reviews the latest types of sports equipment for high schools and colleges; it devotes space each issue to anecdotes of sports and to information on personnel

(Continued on page 73)

Progress

In the Development Of the Pole Vault

By T. E. Jones
Track Coach, University of Wisconsin

THE POLE VAULT is one of several events of which there is no history in the sports of the ancient Greeks. The development of this event belongs to England and Germany. The first record we have of this event is in England where it began as an event for distance, where a pole was in common use to clear water hazards, ditches, and bogs found in the marshy land along the North Sea.

It was adopted as a sporting event by the German Turnverines about 1850. At first, it was a feat of horizontal distance, but as time went on it developed into an event for height, and it was added to the championship track and field programs of America in 1877.

From a spectator's point of view, it perhaps is the most interesting of all field events. It is one of those activities people like to watch—such as bronco busting or parachute jumping—yet, an event in which they hope never to participate.

Until Cornelius Warmerdam, the undisputed Champion of Champions took command, assaults on the records were made by inches. A total advance of seventy-three and one-half inches was made during a period of seventy years of vaulting. Warmerdam holds a nine and one-half inch margin of superiority over all competitors. He has cleared fifteen feet, or over, forty-four times, placing the world record at fifteen feet, eight and one-half inches. When he entered the service in 1943, he

1. Warmerdam clearing 15 feet. He has cleared 15 feet more than forty times



was still on his way to greater heights, with sixteen feet a possibility.

Many factors have contributed to progress in pole vaulting, including the following:

Introduction of the bamboo pole to replace the heavy wooden one. The bamboo pole allows more speed, possesses more recoil, and eliminates much of the danger because of its blunt, non-splinter break.

Placing a vaulting box in front of the pit to insure a solid base from which to rise.

Softer landing pits—shavings—to cushion the athlete's fall.

A movable upright, and better runways.

A still more important factor to progress has been the development of better technique through careful study of forms used by vaulters who were breaking existing records. In this, slow-motion pictures have contributed much.

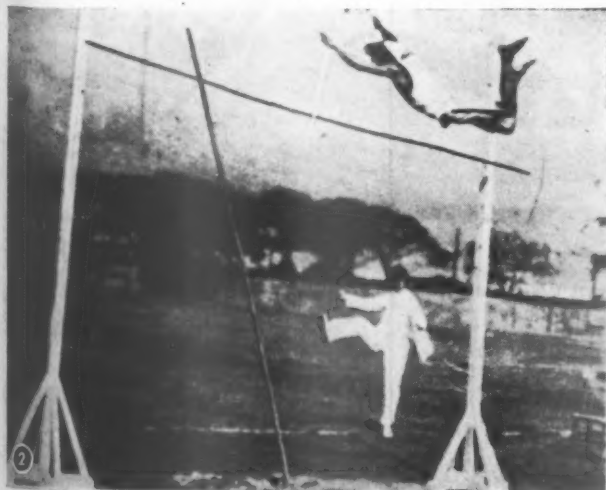
One of the first changes in technique was the introduction of the shift of the lower hand upward as the pole is being placed in the box. Then came the full swing, the delayed pull, the importance of the correct take-off, and improved cross-bar clearance.

Still another factor is that more experienced coaches are employed in our high schools with the result that boys are started out correctly on a system of intelligent practice. Old vaulters knew little about present-day technique. What they knew, they learned through their own experience.

Physical Requirements: Pole vaulting is an event which requires a high degree of natural all-around athletic ability, strong hands, arms, legs, shoulders, back, chest, and abdominal muscles, and, in addition, speed, spring, and a fine sense of balance. But natural ability is not enough. In the pole vault, more than any other track or field event, form makes a champion. Height is an advantage but not a necessity.

For personal equipment, it is best to wear regular vaulting shoes which protect the heels, and give support to the ankles during the preliminary season when the vaulter is learning form. Sprinting shoes, with sponge rubber heels or pads, are best for competition.

A pole should be selected which is suitable to the vaulter's weight. It must be



2. 1800 form, with spectator participation. 3. The shift is not used in 1890 take-off. 4. Swing-up used in the 1890's. Note that there is no knee lift nor hand shift

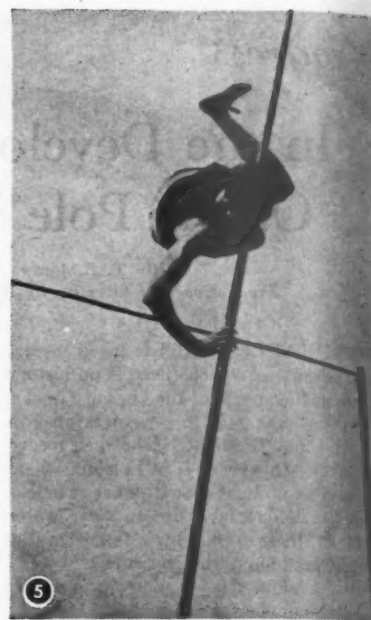
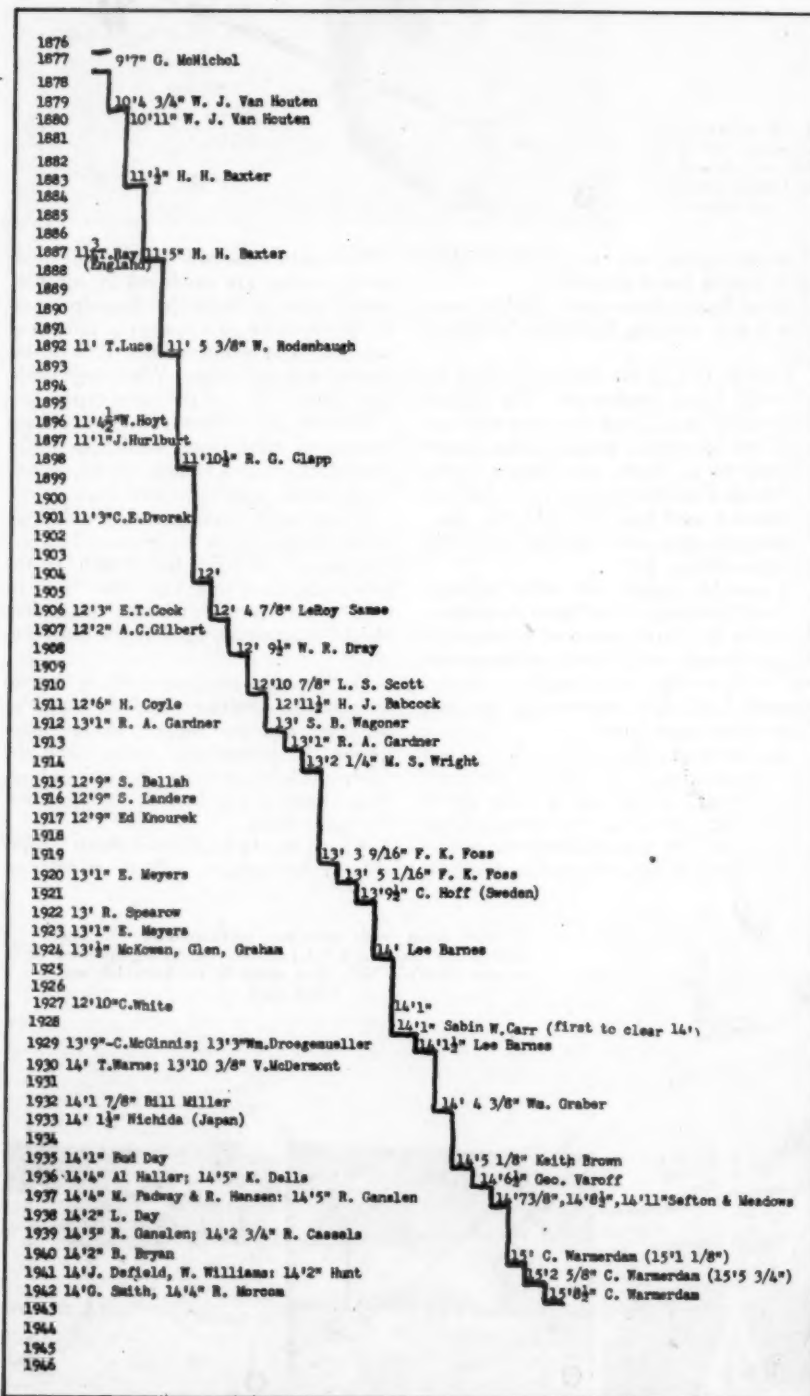


straight, strong, fairly uniform in diameter, evenly balanced, and well-seasoned. The pole should be flexible enough to absorb some of the shock at the takeoff, yet strong enough to hold the vaulter's weight, and it should also have sufficient life to recoil, or snap back, when the vaulter pushes off at the top of his vault in bar clearance.

Grasp on the Pole: In the approach run, a vaulter who takes-off the left foot should carry the pole on his right side. His

hands should be about two and one-half feet apart, with the right hand nearest the top of the pole. The left hand should be in a knuckles-up position, and the right in a knuckles-down position. The height of the grip on the pole varies with the height of the vaulter, his speed, and the height of the bar.

Gripping the pole at the height of the cross-bar applies in the early stages of learning correct technique. The height of



5. Side clearance used in the '90's

the hold on the pole is raised as the bar goes up. This change should be slight and gradual, because it changes the rhythm of a vaulter's swing and pull. Most twelve and thirteen-foot vaulters grip the pole at twelve feet, while more fourteen-foot vaul-

Record holders are shown on the right of the heavy line; notable performances on the left

ters grip it at twelve feet, six inches. Meadows, Sefton, and Dells grip it at twelve feet, eleven inches, while Warmerdam's hand grip is thirteen feet, three inches, allowing eight inches for the box.

6. Bar clearance used in 1900





7. Milton Padway, University of Wisconsin, demonstrates the low carry of the pole. Padway cleared 14 feet 4 inches in 1937. 8. Tom Warne, also of Wisconsin, demonstrates the high carry of the pole.



9. Bill Williams, demonstrates the medium carry of the pole. Williams cleared 14 feet in 1941. Vaulters use the method of carry which enables them to handle the pole in a comfortable manner, and to obtain freedom in running.

Carry: There are three styles of carry in use, the high, the low—parallel to the ground—and the medium. The pole should be carried in a comfortable manner, to allow freedom in running.

The left, or lower arm, should be about the height of the vaulter's waist. The right, or rear arm, should be bent slightly with the elbow directly above the pole. The pole should rest against the heel of the palm, without tenseness, and be well balanced between the hands. It should be pointed straight ahead at the box with the front end about at the height of the eyes. There should be no shoulder, or body twisting, during the run.

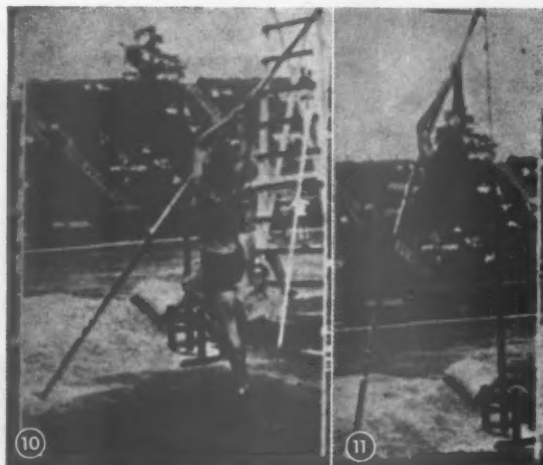
Approach, or run: The purpose of the run is to develop momentum. A uniform stride must be developed for the approach, so that the same number of strides from

a given point will always bring the vaulter up to the correct take-off spot. The speed of the run is gradually increased from the start, except that the last two strides are "coasted" to permit a settling down for the spring, to get the take-off foot under

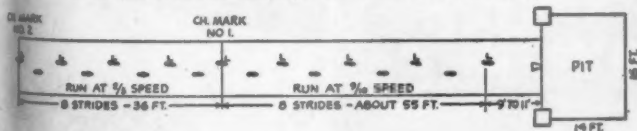
the center of gravity, and also to concentrate on a perfect take-off.

A long run is not necessary for a beginner. The length of the run varies but generally the distance is 90 to 120 feet. Varoff ran 118 feet, and had his check

10. Warmerdam at take-off. Note perpendicular line from hands to take-off foot. 11. Warmerdam, showing delayed pull and swing. Below, stride plans for right-hand vaulter.

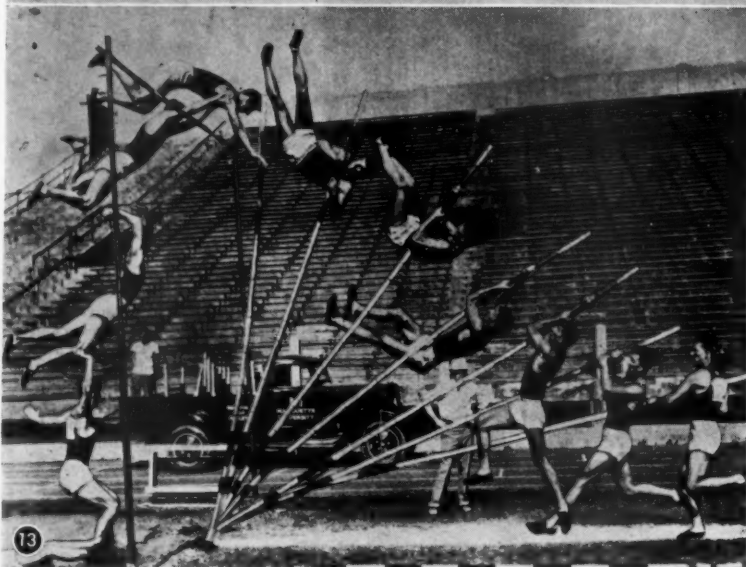


Stride Plans for the Pole Vault, Right Hand Vaulter—Left Foot, Take-Off





12

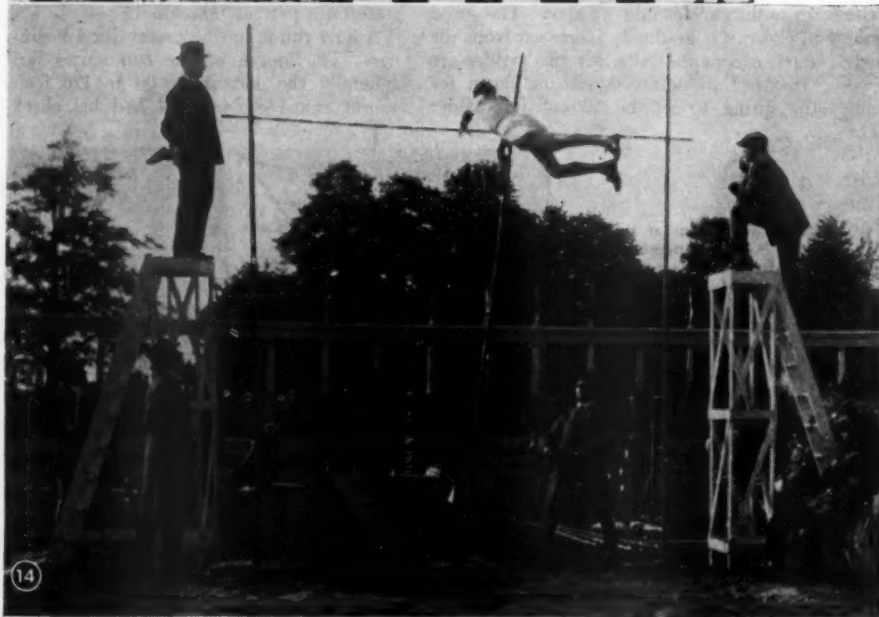


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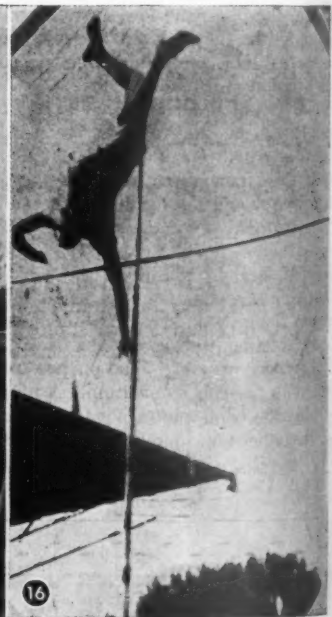


15 Sefton

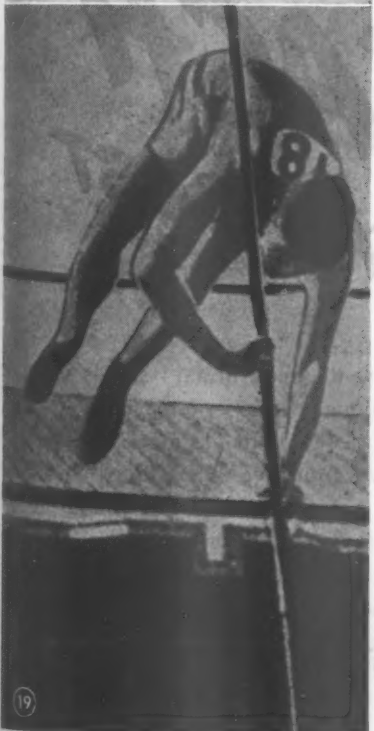
12. Sequence series of Tom Warne. 13. Sequence series of Al Haller who did 14 feet, 4 inches in 1936. Note the early plant, complete shift of left hand, and partially flexed arms. Arms are partially extended in the fourth part of the sequence. 14. Meyers in the fly-away clearance. 15. Sefton, showing powerful push-off. 16. Lee Barnes, winning the Olympic championship at 12 feet, eleven and one-half inches, in 1934. Note the excellent double push-off.



14



16



mark at 86. Haller ran 117, with his mark at 71, and Padway 120, with a mark of 77. Meadows, Sefton, Barnes, and Day ran 105, with marks at 85, and Warmerdam, 140, with marks at 85.

All vaulters use a system of two check marks while learning to vault. However, when the vault is perfected, many discontinue the use of the mark nearest the pit, because they want to concentrate their vision on the vaulting box.

The nearest mark to the pit—approximately fifty-five feet—is determined first from the take-off spot, or sixty-five feet from the pit. The second mark, eight strides further, will be ninety or ninety-five feet. Both marks should be hit with the take-off foot. All vaulters take a few preliminary steps covering ten or twelve feet, before they hit the back mark, making a total distance of 105 feet.

While speed is one of the most important factors in record breaking, it must be controlled, with balance and rhythm maintained.

The pole plant, and hand shift are very important and difficult parts of the vault to perfect. The stride, plant, and shift must be synchronized. The pole must be planted directly in front of the body, with the take-off foot and hands on the same line.

The pole may be planted with an overhand, under, or side-arm thrust. The overhand plant is made by raising the right hand forward and upward over the head, as the pole hits the box, while the underhand plant is made by swinging the right hand forward and upward past the hips, extending both arms forward and upward above the head.

The take-off foot should be in the center of the runway. The pole is started forward on the next to the last stride, so that the take-off foot and the pole hit the ground together. At the same time, the lower hand is shifted up to the top hand so that both arms contribute to the pull-up. Some good vaulters, however, have a slight hand spread. When the pole strikes the box, the arms should be flexed slightly to absorb the shock of the momentum, as the swing is started. The hand shift must be completed, and the grasp must be firm, before the swing of the body forward from the take-off is started.

An early plant, by sliding the pole forward into the box, tends to bring the take-



17. Keith Brown of Yale who used the fly-away clearance. 18. Earl Meadows, who used the arch clearance, with the double push-off. Note that the right hand grasps the pole permitting an added push-up as it is released. 19. Dray, a 1908 vaulter, shows an excellent jackknife clearance. 20. Foss, in throw-away. 21. Brooker, in push-off at 13 feet. 22. Padway, in fly-away clearance.

3. Sefton, Barnes, and Day ran 105, with marks at 85, and Warmerdam, 140, with marks at 85.



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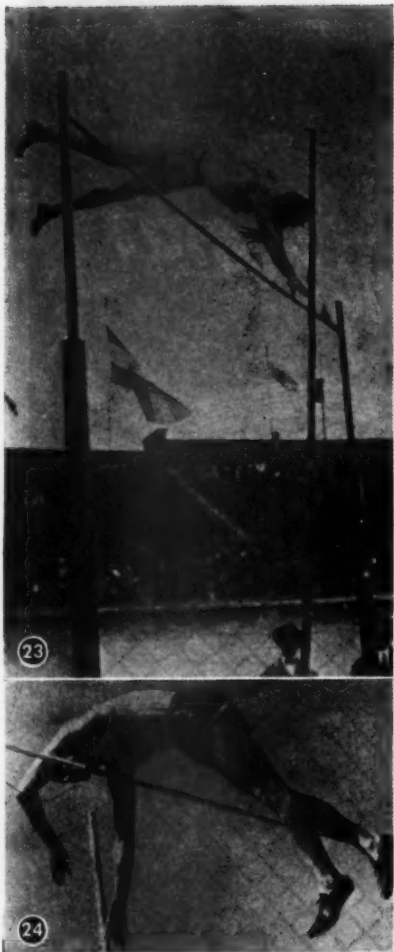
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23. Sabin Carr, as he clears the bar at 13 feet, nine and three-eighths inches, to set a new Olympic record. The picture was taken at the 1928 event. Carr was the first vaulter to clear 14 feet. He accomplished this feat also in 1928, going 14 feet, 1 inch. 24. Warmerdam, shown as he clears the bar, using the arch clearance and double push-off. 26. Sketches, illustrating Earl Meadows' style of pull-up, kick, push-off, and throw away. Meadows cleared 14 feet, 11 inches.

off foot, body, and hands into a straight line. A straight line drawn down the center of the runway helps a vaulter to place his take-off foot in line. Most vaulters take-off an inch or two to the right of center. If out of line more than that, a towel or sweat shirt placed on the ground a few inches to the right will help crowd the take-off foot over into line. Hitting the leg or chest against the pole in the swing is caused by a take-off out of line. The foot, body, and arms must be in line with the moving plane of the pole.

Top-flight vaulting requires that the take-off, swing, pull, and turn, be blended together into one smooth, co-ordinated movement. Of these four, the take-off is the most important, because it starts the vault. Nearly all vaulting pictures—stills—have been taken when the vaulter is over the bar, none at the take-off. Slow-motion pictures have aided greatly in mechanical analysis of the important factors in the early and middle stages of the vault.

Takeoff: The take-off foot should be in the center of the runway, in line with the hands. It should be directly under the hands. This spot is found by placing the lower end of the pole in the box, then standing under it and raising the other end above the head, while grasping the pole with both hands, so that the hands on the pole, and the head, hips, and feet, are approximately in a straight line perpendicularly. The distance of this spot on the runway from the box will vary with the height of the individual vaulter, his speed, and proficiency—from eight to nine feet for the novice, and from ten to eleven feet for the expert. It is helpful to draw a chalk line ten feet from the box so the vaulter may gauge and adjust his take-off from this point. The line should



25. Warmerdam, present record holder, clearing the bar at 15 feet, seven and three-quarter inches. Note the perfect balance and excellent push-up position. His right shoulder is close to the pole, and his body is directly above the pole in a vertical position.

be moved back as the vaulter progresses. The take-off should be flat-footed with a quick "rock" to the toe. No great attempt should be made to jump off the ground. The effort should be toward getting the weight over the take-off foot quickly, to start a good swing and knee lift of the free leg. A vaulter must learn to "ride" the pole.

(Continued on page 67)

Pull-up.



Kick.



Push-off.



Throw-away.



The National Federation

Its Growth

And Service

By H. V. Porter

Executive Secretary



THE twenty-fifth anniversary of the ATHLETIC JOURNAL misses the like anniversary of the NATIONAL FEDERATION by only one year. Hence, any summary of Federation activity is also a general summary for the high school activities during the period which is covered by this anniversary number of the Journal.

During this quarter of a century, there have been so many significant developments in high school athletic activity that a summation involves a problem of selection. The writer makes no claim that this article covers all of the important developments.

One of the outstanding developments has been the rapid growth in size and strength of the high school organizations, as represented in their state associations and finally in the National Federation. Twenty-five years ago, there were no full-time state high school executive offices or officers. The work of the associations was merely a sideline, performed by an interested high school superintendent, principal, or athletic director. In a few cases, the person was paid a small fee for doing the work, but this was merely a supplement to his regular salary as a high school faculty member. The first full-time executive officers were appointed in 1922. They were C. W. Whitten of Illinois, and A. L. Treaster of Indiana. The work in other states gradually developed to the point where it was too much of a task for a faculty member, and independent offices with a full-time executive officer have been established in Delaware, Illinois, Indiana, Iowa, Kansas, Minnesota, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Virginia, Wisconsin. In addition to the full-time officers, nearly all of the remaining states employ an executive who devotes a considerable portion of his time to the work of the state association.

A similar growth has been made in the National Federation work. Twenty-five years ago, the organization activities consisted of holding one informal conference each year. The work soon expanded to include many nation-wide activities, and the office work was administered in connection with one of the state association offices. By 1940, this work had grown so it could not be handled as a sideline of a state association office. A national office, with a full-time staff, was authorized in February 1940.

The state association work has become broader with each year. Originally, the primary duty of the state association was to enforce eligibility and contest rules. The work has gradually broadened to the place



H. V. Porter

where the rules enforcement activities, while still important, are only one of many duties of the state office. A wide variety of services are performed.

One of the services is that connected with adaptation of the various sports to the needs of the high school student, and to the high school program. This has involved certain desirable changes in the type of equipment which is used in the high school game. In the early years, all equipment was made to fit the needs of unusually well-developed adults, and little thought was given to the need of the high school students for equipment suited to their own abilities and interests. Through state and national organizations, intensive experimental work was fostered. This resulted in building a slightly smaller football, a slightly smaller basketball and revised track equipment for high school use.

In order to interest manufacturers in these implements, and to obtain wide

spread use of them, it was necessary to modify the rules of some of the games to legalize such equipment. This is one of many factors which led to activity in connection with the making and administering of the rules in football, basketball, baseball, and track. The rules, as adapted to the high school needs, have been devised after careful study by many thousands of men who are directly connected with the groups for which such rules are intended.

Naturally, study of equipment led to a study of actual game provisions. Improvements have been made in playing regulations to promote a more attractive game, one better suited to the needs of the school program. This was true in football where a more open type game has developed during the past ten or fifteen years. Forward passes and lateral passes have increased because of changed interests of players and spectators, and because the rules bodies have adapted the game gradually to these changes. The same thing applies to many other departments of the game. The safety factor has been an important one. In the early 1930's, careful studies revealed that for a comprehensive listed set of fractures and sprains, there was an average of 90 such injuries for each 1000 players. Rules investigations enabled the high school groups to determine how and why these injuries occurred. Having determined the causes, modifications were made in the rules, and in the type of rules administration so that the listed injuries now occur on an average of only 26 for each 1000 players. Incidentally, this rules study in connection with attempts to provide a safer game led to interest in a type of athletic accident benefit coverage which now provides protection for more than 200,000 players.

The adaptation of the game to high school needs was followed by a natural tendency to improve all phases of game administration. Twenty-five years ago, officiating was a hit or miss proposition, in all except a few well-organized communities. Rules study and discussion of officiating problems was limited to a few groups which operated in populous centers but which were not available for wide general use. The result was a lack of uniformity. Teams which were accustomed to the officiating in one section of the state were helpless when confronted with the inter-

(Continued on page 66)



RIDDELL...

During the years 1913-1927, Mr. Riddell was coach at Evanston Township High School, Evanston, Illinois. The day before a game when it was indicated that the game would be played on a muddy field, Mr. Riddell took the football shoes to a local cobbler to have mud cleats installed.

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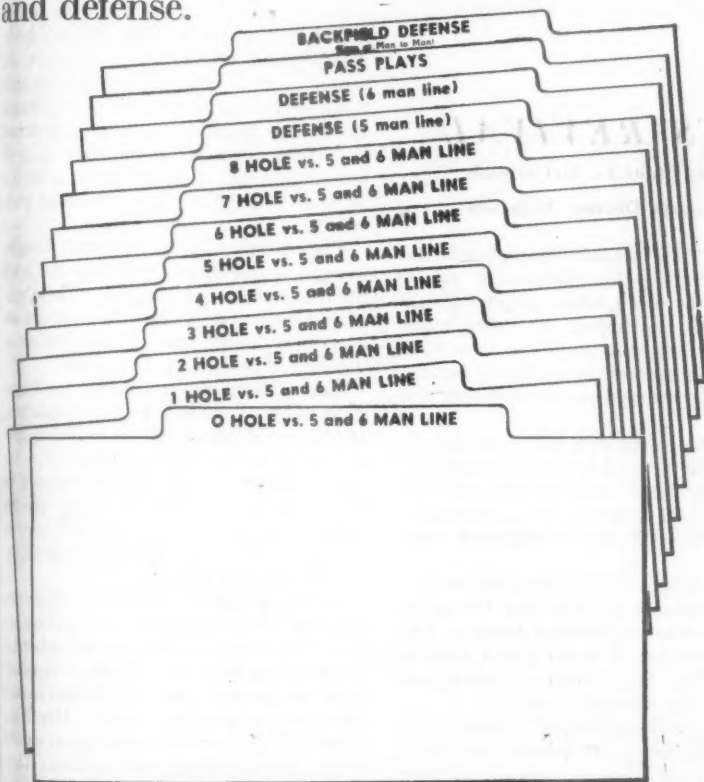
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BASEBALL

ITS DECLINE

By L. W. St. John

Athletic Director, Ohio State

BASEBALL, as a game is played virtually the same today as it was thirty years ago. The sport uses the same number of men, the same number of bases, and practically the only change has been in the kind of equipment. Yet, we hear that college baseball, as played now, is a "far cry" from that of the "old days."

Professional baseball has held its position, become even more the national game, and there has been little change in the high school sport.

But, college baseball has slipped. Something seems to have happened. But what?

There can be no question but that there has been a loss of interest by both spectators and players. To put a finger on any one factor seems difficult. Rather, it seems many factors have entered the picture to cause individuals, who might play college baseball, to go into other activities.

In the "old days," every youngster who was big enough to lift a glove, or strong enough to swing a bat, played baseball. Interest in the game was keen, all the way from boys' clubs to the major league teams. There can be no doubt that many a youngster played baseball right through his noon or evening meal.

Moving into the high schools, these same boys were primarily baseball enthusiasts. Yes, they played football and basketball, but baseball was their first love. Any day during the winter, even if the sun shone only briefly, these boys would be out "playing catch"—just getting an early start. Then in the Spring and Summer, baseball really flourished. High school leagues were formed, industrial leagues functioned, the community always had a "home" team, and interest was widespread.

These same youngsters, with this background, love of the game, and a desire to play ball, went to college with more than just a ball, glove, and bat. They brought a spirit that was fine to see, a desire to learn, and a yearning to play ball for all it was worth. Consequently, they played it that way, and it left nothing to be desired. The game was the thing.

But, times have changed, and so has college baseball. While there probably are many factors, it seems that the growth of interest in softball, glamorizing of football and the game of golf have taken their toll of prospective "dye-in-the-wool" baseball players.

In the old days, every community had its hardball team, but now most of them play softball. The reasons for the popularity of softball are fairly obvious. It is similar enough to baseball to invite participation of some of those who normally would be playing the real game. It takes less space, less equipment, and can be played by anyone—the young as well as the old, the girls as well as the boys. It is a game set up for those who do not have the ability, time, space, or the desire to play baseball. Previous to the advent of softball, these people were the red-hot rooters for the home team. Where they previously had been spectators, they became participants, which is a fine thing, generally speaking, but it did take away

(Continued on page 36)

ITS FUTURE

By Dan Jessee

Baseball Coach, Trinity

SEVERAL years before the war, baseball staged a comeback on the college campus and in amateur circles. Prior to this, baseball had been dropped by a number of colleges because of the small gate receipts, and the high cost of equipment. The football and basketball gates made many colleges mercenary minded, and they lost sight of baseball, the American game we love and know as our national pastime.

Big league clubs, in the past, have done little to help foster baseball in high schools, colleges, and sand lots. As a result, the source of their material was left to shift for itself. Also, a number of big league clubs were guilty of signing high school boys who might otherwise have gone to college, and had an opportunity to receive an education and develop as baseball players.

The American and National Leagues have produced films to promote and teach the fundamentals of baseball. These ventures have helped, their value was not enhanced by "shots" on why this product or that should be used by champions.

Baseball schools were run by big league clubs to pick our likely looking candidates, and to give some instruction. This helped in a way to interest young boys in the game. However, the emphasis should be placed on even younger boys, as the returns would be greater. As it is, the crop is being harvested before it has had the proper care and growth.

I believe a number of these ills have been relegated to the past, and a realization has dawned on the men who are in authoritative positions that baseball should not only be one of our basic sports, but deserves the right to be among the leaders. Organizations such as the American Legion should be praised for their contribution. They have inoculated the public against a number of ills, which in time might have uprooted the game. They started competition in baseball among boys up to the age of sixteen years. Teams are formed and regional tournaments held. The winners of these regional tournaments are brought together and a national championship played. There is tremendous enthusiasm in these tournaments and thousands of youngsters are able to play under the guidance of competent instructors.

The National Baseball Congress, of

(Continued on page 64)

ITS REVIVAL

By Frank G. McCormick

Athletic Director, Minnesota

BY 1924, baseball for sports sake was almost a thing of the past. On the other hand, while our typically national sport was slipping out of the picture, as far as amateur play was concerned, athletics in general were growing rapidly, and had been since the close of World War I.

Those of us who were interested in baseball for the sake of baseball realized that it must be "sold" on its merits, and that its haphazard existence, with subsequent bad effects, could not be remedied overnight.

The first step toward restoring and expanding amateur baseball play was taken by the then active National Amateur Athletic Federation, of which Major John L. Griffith, Big Ten Athletic commissioner, was executive vice president.

The Federation stressed baseball as a community asset. It pointed out that:

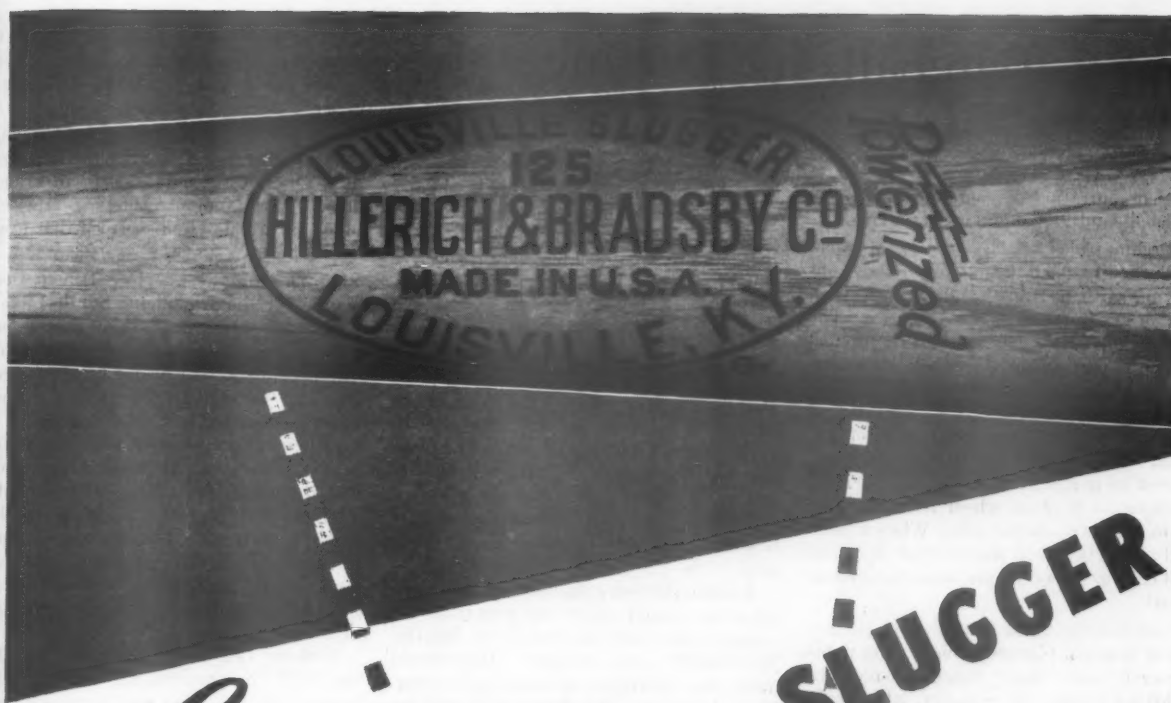
An amateur league or team, playing several times each week during the season, provided splendid recreation for the players and spectators.

Baseball is a sport which brings people together out of doors to witness examples of good sportsmanship.

Baseball is a crime deterrent because it occupies the leisure hours of youngsters, and keeps them under supervision.

In 1928, the Big Ten Conference conducted a survey in sixteen states, in an attempt to determine true status of "town" baseball, professional, semi-professional,

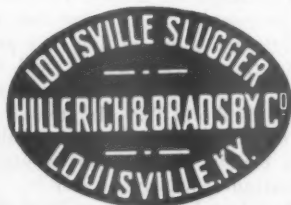
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Baseball, Its Decline

(Continued from page 34)

the concentration of community spirit in baseball and the individuals playing it.

Organizations which previously had sponsored baseball teams became the sponsor of softball teams, and baseball died out of the picture in many places. The college ball player has not had the opportunity to participate in baseball during the summer months because of withdrawal of interest on the part of the factories and industrial concerns, now backers of softball teams. Yet the college ball player is expected to participate in the sport if he is working at a plant which has a softball team. The two do not mix. When a baseball player begins to play softball, his baseball days as a good player, seem to be numbered.

Golf also has taken from the prospective list of baseball players an increasing number each year. Many youngsters now are caddying during the Summer, whereas in former years they probably would have been found in some back lot playing baseball. These same youngsters acquire a knowledge of the game, play it more and more, and, since golf is a sport of good competition and skill, they just never get around to playing anything else. They become prospective members of college golf teams, not college baseball teams.

Increase in popularity of college football has taken its toll in baseball ranks. Many coaches have asked a boy to make a choice between football and baseball as a varsity

sport. The college boy seldom chooses baseball, for the thrill of playing before a possible crowd of 75,000 people is a big temptation. So, possibly good prospective ball players are lost.

During the war, baseball was played from the smallest army camp to the very theaters of war. Traveling teams, made up of major leaguers, were constantly playing in the camps. The G.I.'s returning to college should want to play baseball. In any event, the collegiate game should prosper from the wealth of likely material returning to school.

There is no question but that college baseball is on the way back. But it needs help.

Athletic directors should look upon the game as a major sport, and give it all the support necessary to permit its rightful place on the varsity calendar. They should insist that schedules be made interesting. They should provide adequate facilities for playing the game. Publicity should be well organized and sufficient.

The American Legion has done a grand job in creating interest in baseball among the younger groups. Knot Hole leagues have been organized. Industrial plants once more will sponsor summer leagues. Professional baseball has increased the number of its farm clubs, and taken an active interest in the semi-pro field.

All of this is good. It shows that baseball is a common denominator in recreation, a place it should always maintain.

ble Legion project to promote athletics for boys, a project which also would help establish the Legion as an unselfish, democratic-minded organization.

Major Griffith had the thought in mind that one member of each of the thousands of Legion Posts could act as an athletic officer, to promote athletics, especially baseball. Judge Landis agreed that it was a good idea.

At that time, I was Department Commander of the Legion for South Dakota. I wrote Major Griffith asking that he present his idea at our convention later in the summer. Following Major Griffith's presentation, we decided to sponsor a boy's baseball program in South Dakota.

General Drain, then national commander of the Legion, felt that the program deserved national recognition. He asked Major Griffith to present the idea to the Legion's Americanism Commission of which Frank Cross was director. The Commission approved the idea, and it was adopted by the Legion at its annual convention later in the year.

Without Legion appropriations in 1926 and 1927, the program was made possible by contributions from sporting goods manufacturers. More than 50,000 boys participated on Legion teams the first year. By 1928, when Dan Sowers of Kentucky was director of the Americanism Commission, the program had 150,000 participants, and for the first time financial aid was solicited from organized baseball. Generous financial assistance from the baseball commissioner's office has been forthcoming each year since that time. Succeeding directors of the Americanism Commission bent every effort toward expanding and improving the program. These directors included J. Russell Cook, Homer Chaillaux, and the present director, Elmer W. Sherwood.

Director Sherwood reports that the 1945 season was one of the best Legion junior baseball years. There were approximately 300,000 participants. There were 5,000 teams in forty-five Departments in national competition play. These teams were sponsored by American Legion Posts, in addition to 11,000 additional teams made up of Cubs, Junior Juniors, and others in lower age brackets.

The Major leagues contributed \$20,000 to the program in 1945, and they will contribute the same amount this year. In 1946, the American Legion, with its more than 13,000 Posts, and with tens of thousands of World War II veterans assisting in the direction of junior baseball activities, expects to offer every youngster the opportunity to play baseball.

American Legion Junior Baseball "graduates" continue their baseball activities as a part of school and college life, as recreation, and many players have gone on to successful careers in organized baseball. Since 1926, eighty-two former Legion play-

(Continued on page 65)

Baseball, Its Revival

(Continued from page 34)

and amateur. The survey, based on replies concerning 2,730 towns, showed that:

Professional or semi-professional baseball had never been played in 305 of the towns; 65 towns had teams several years before that time; 105 towns had teams prior to 1916, 239 towns had teams between 1916 and 1920; 907 towns had teams between 1921 and 1926, and that 170 towns dropped semi-professional baseball in 1927, while only 34 towns had plans to establish teams. More than 500 towns had no baseball teams at the time of the survey. The encouraging note in the survey was that 1,609 towns reported amateur baseball teams or leagues.

This spurt, if we may call it that, in amateur baseball did not come about just because the Federation had distributed

thousands of booklets designed to promote athletics, especially baseball. This aided, of course, but the actual revival of amateur baseball, pointing toward the position it occupies today, had its main impetus from the American Legion Junior baseball program. During the first two years of the program—1926 and 1927—however, the Federation, sponsored mainly by sporting goods manufacturers, was financially responsible for operation of the Legion's program.

It is interesting to note how great things, such as the Legion's amateur baseball program, have such small beginnings. It was in the summer of 1925, on a train coming back to Chicago from an American Legion convention in Iowa, that Major Griffith and Judge Landis were discussing a possi-

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Basketball



By H. V. Porter

Executive Secretary, National Federation
of State High School Athletic Associations

IN THE early 1920's, there was a basketball clinic and demonstration at Decatur, Illinois. The writer took his team sixty miles over sleet-coated pavement to participate in the demonstration, and to speak on the subject: *Basketball—55-44 or 11-7?* At the time, there was little agreement on the application of certain rules concerning acts such as running, coming to a stop, standing blocks, moving blocks, and other similar situations. Also, there was much concern about the delayed type of offense, stalling tactics, and low scores. There was a fifty-fifty difference of opinion as to whether the trend should be toward a defensive game—hockey-style—with an average score of 11 to 7, or an offensive type of game which would have an average score of 55 to 44. It was a time when a decision was necessary. Basketball leaders and rules authorities were at the crossroads, where their decision would have a lasting effect on the game. The meeting was one of the opening guns to proclaim a determination

on the part of those present to work toward a game with more prolific scoring.

There were several proposals made, which, if followed, would encourage such a game. It was suggested that higher scoring could be insured by a slight change in the playing implements. One possibility was to increase the size of the basket from its present eighteen-inch diameter to a diameter of twenty inches. Experimentation was conducted with such baskets, but ultimately the sentiment was against the increase.

The other proposals had greater possibilities. One involved a reduction in the size of the basketball. After ten years of promotional work, this was brought about, and the old-type ball, with a circumference of thirty-one inches was first reduced to thirty inches, and later to twenty-nine and a half inches. This reduction permitted more skillful ball handling, and a higher percentage of successful tries. This, in turn, led to increased attention to offensive play, and to greater "risks" in the matter

of shooting and tries from other than set, flat-footed positions.

Another fundamental factor was discussed—the question of the amount of contact which should be permitted. Experimentation proved that there was a high degree of correlation between size of score, and the closeness with which contact was called. At the time of the meeting, it was common practice for news reporters to pan those officials who, according to the commentators, *should throw their whistles away*. It was claimed that the crowd came to see action rather than a parade to the free-throw line. It took considerable courage for an official to attempt to administer the game in accordance with the letter of the rule. No one seemed to know what the spirit of the rule was in connection with contact. In the following ten years, the decision reached by this group, and by similar groups in other parts of the country, had a profound influence on the development of the game. A promotional program was put into operation to "educate" players, coaches, and the general public to a type of game in which contact rules would be enforced. The old type of stalling tactics, which held the final score to a figure which approached that of a baseball game, were gradually outmoded. Scores began to climb, and the popularity of the game increased in proportion.

The basketball fan gets a thrill from seeing the ball go through the basket. He is a bear for punishment when it comes to a shower of such thrills. His emotional system is geared to "take it."

The average total score, for both teams, has increased each year. In the early 1920's, the average total score for high school games was thirty-six points. By 1939, this average had increased to fifty-seven points. By 1942, it was sixty-eight points, seventy points in 1943, seventy-seven points in 1944, and eighty-four points last year. The number of personal fouls also has shown an increase, but this increase is not as great as the proportionate increase in the size of the score.

Action in the game was increased greatly when the *center jump* was eliminated. Stalling was further curbed when the 10-second rule was adopted. This rule prevents any great amount of stalling in the back half of the court, and it gives the defensive team enough of an advantage to entice it out to meet the play over the front half of the court.

One of the other notable changes in the game has been in the type of tries for a field goal. In the early 1920's, a *one-hand try* was considered a maneuver which could be executed only by professionals, and only at rare intervals at that. A high school or college player who attempted such an act was accused of playing to the grandstand. More than one player has been jerked from the game, because he refused to come to a flat-footed stop before attempting a goal. During the past ten



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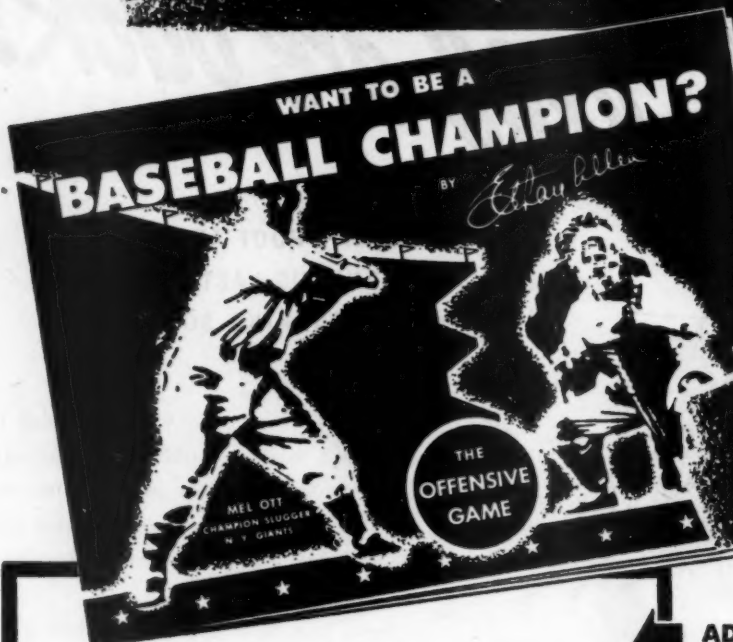
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promoter of the game, Lew Fonseca deserves the title, Professor of Baseball.

ETHAN ALLEN

played 13 years of big-league ball, has been writing, teaching, and promoting baseball since his retirement to direct and produce movies for the National League. Allen has a M.A. in physical education, Columbia University. He has planned and conducted baseball schools, including the New York Journal-American's annual baseball clinic. He was recently appointed Head Baseball Coach, Yale University.

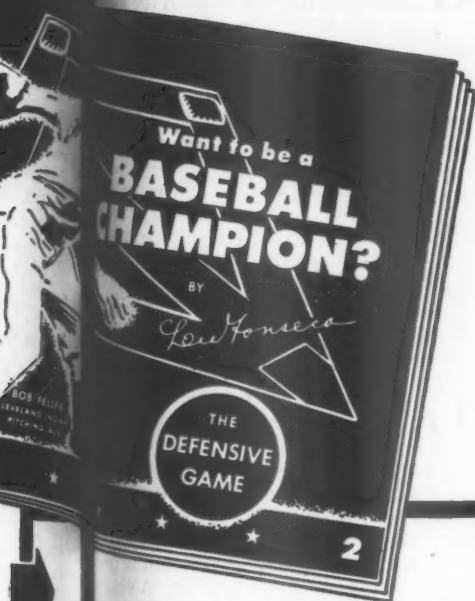


CARL NORDLY

is over-all director of Wheaties Library of Sports. Professor of Physical Education, University of Minnesota, Dr. Nordly is nationally famed as an author, coach and lecturer.

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years, one-handed shooting has become common. In 1937, records indicate that the number of two-hand tries and one-hand tries were about equal in number. By 1939, fifty-two percent of all tries were with one-hand. By 1943, the percentage had increased to seventy percent, and in 1945 it was eighty-one percent. The one-hand try, executed from a running, standing, or retreating position, has greatly reduced the amount of contact. Players do not find it necessary to charge through opposition in order to get both hands free for a set shot. Clever feints, side-steps, change of pace, change of hand on the way up to shoot, and other similar skillful maneuvers are possible. Players have become ambidextrous, and often score a high percentage of their goals with the "off hand."

With the decrease in contact, the number of held balls has been greatly reduced. In 1937, there was an average of thirty held balls per game. By 1944, this was reduced to nineteen per game, and more recent figures indicate that the average number is about twelve per game. The number of out-of-bounds balls has also decreased from thirty-one per game in 1942, to fourteen per game in 1945.

Two other significant changes had to do with playing equipment. One of these was the invention and widespread use of the *molded type ball*. This ball holds a perfect shape, does not stretch, and has an accurate rebound during passes or dribbles. It has contributed a great deal toward the increase in scoring, and toward a more skillful type of ball handling. An even more important development is the widespread use of the *small fan-shaped backboard*. Such a board has only forty-three percent of the area of the original rectangular board, and it permits play to come into the basket from all directions. The area from which a field goal may be made has been increased. The smaller target encourages more accurate shooting, and more clear baskets, because aim is direct at the ring, rather than at the backboard. For high school play, the small board has been accepted nationally, and its use in college and independent play has grown.

Rules Changes

The Dribble: In 1920, an illegal dribble was a technical foul. In 1922, the illegal dribble penalty was changed from a technical foul to a violation. In 1924, rules called for the dribbler to drop a ball, before lifting his pivot foot. In 1935, a fumble was not considered part of a dribble.

Penalties and Goal Values: In 1920, four personal fouls disqualified (five such fouls disqualified in 1908). In 1944, the five-foul disqualification rule was again adopted.

Jumping Rules: In 1929, the jumper could tap the ball once. In 1930, the

jumper could tap the ball twice, but could not touch it again until it was touched by a non-player. Leaving circle too soon was a foul. In 1934, high school groups moved jumps away from the basket. In 1935, the center jump, after a successful free throw, was eliminated. Free-throw circles were made restraining circles for a jump at the throw lines. In 1936, experimentation with other center jumps reduced. The restraining circle at center was six feet. In 1937, all center jumps, after any successful goal, were eliminated. Any held ball, in a lane or the six-foot circle were moved to the center of the circle. In 1939, the center jump, after an unsuccessful free throw for a technical foul, was eliminated. In 1940-1941, a questionnaire vote showed only small percent favored return of center jumps. In 1945, leaving the jumping circle too soon was changed to a violation, and the official was authorized to withhold his whistle.

Four Foot End Line and Small Backboard: In 1934, data on location of fouls drew attention to congestion in front of the backboard. In 1935, experimentation in moving backboards farther in court. In 1936, experimental use of methods to bring play into basket from all directions. In 1937, state high school associations and some college conferences authorized end line four feet behind backboard. There were detailed charts issued by state associations to show the part of the backboard which is actually needed. In 1938, the four-foot end line was made legal, at the option of the home team. In 1939, the influence of a smaller backboard in relieving congestion in front of the basket was studied, and findings presented to the National Committee. A sub-committee was appointed to draft plans. In 1940, small, fan-shaped backboard, as submitted by the sub-committee, was made legal. In 1941, the small backboard was designated as standard. In 1942, all reference to the two-foot end line was deleted from the rules. In 1943, the small backboard was specified for all new high school gymnasiums.

The Ball: In 1929, the National Federation petitioned for twenty-nine and a half-inch ball for high school use. In 1930, a minimum circumference of thirty inches was authorized. In 1931, high schools authorized a twenty-nine and a half-inch ball. In 1934, a twenty-nine and a half-inch ball was legalized for all groups.

Blocking and Screening: In 1931, almost any act was claimed by the opponent to be an illegal block. A sub-committee was appointed to study the problem. In 1932, the sub-committee used slow-motion pictures to reduce claimed blocks to their elements of extension of elbow, hip, or shoulder.

Comments, based on the committee's report, were inserted in the rules supplement. In 1933, the definition of blocking

from here and there...

(Continued from page 8)

GEORGE SAUER, former Nebraska football player, and coach at the University of New Hampshire, has been named head football coach at the University of Kansas . . . Frank H. Wickhorst, line coach at the University of California, Berkeley, from 1931 until 1942, when he entered the armed forces, has been named as head football coach at California, succeeding L. T. "Buck" Shaw . . . George R. Edwards, head basketball coach at the University of Missouri for twenty years, will retire at the end of this season to devote all of his time to business affairs of the university's athletic department, and to teaching physical education.

* * *

G. L. "LES" DUKE, athletic director and track coach at Grinnell College, Grinnell, Iowa, is on a one-year leave of absence, studying for his master's degree at the University of Wisconsin. He is also serving as an assistant coach at a Madison, Wisconsin high school. . . . Robert J. N. Kipmuth has been named chairman of the board of athletic control at Yale. A noted swimming coach, he developed such world record breakers as John Magionis and Alan Ford. . . . John Baker, head football coach at George Washington University, has resigned to become director of athletics and head coach at the Merchant Marine Academy, San Mateo, California.

was changed to be partially in harmony with recommended legalization of screening. In 1935, blocking was reduced to contact situations, except for "face-blocking." In 1937, "face-blocking" was eliminated, so there could be no block without contact. In 1945, a definite statement about responsibility for contact in attempted screens was included in Rule 10.

Three-Second Lane Rule: In 1932 the rule was made to apply only to the ball holder with his back to basket. In 1933, the rule was made to apply regardless of facing direction. In 1935, the rule was made to apply to any player of the team in control of the ball, and in entire circle and lane. In 1941, the rule was made to apply only in the lane between the free-throw line, and the end line.

Ten-Second Rule: In 1932, the rule was adopted. Any player could return the ball to the back court after the jump, etc. In 1933, only the first player to touch the ball could return it. In 1938, the rule was modified to make the division line always in the back court. In 1944, a ball could be returned only after a jump. In 1945, the restriction applies only to the team in control.

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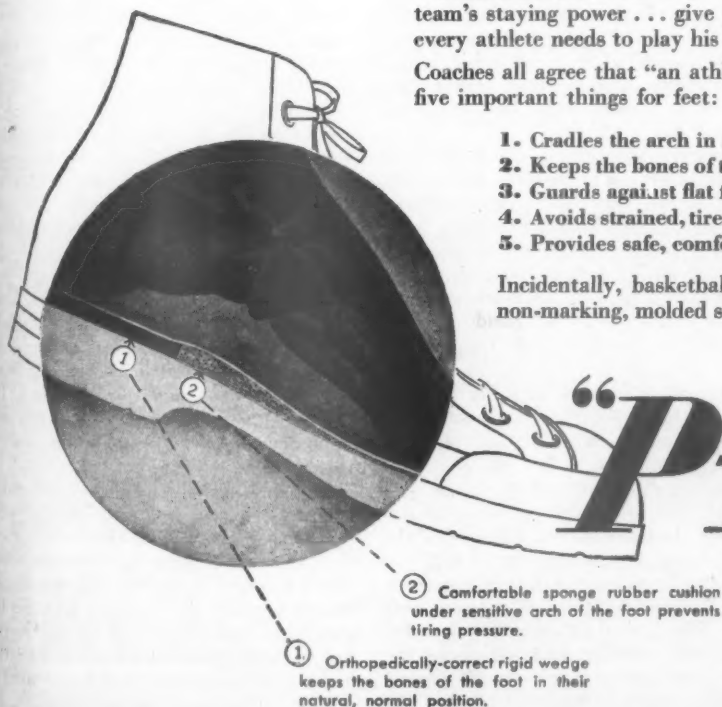
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College Basketball Its History

By Frank W. Keaney

Athletic Director, Rhode Island State College

BASKETBALL, slightly more than a half century old, was founded by James Naismith, Springfield College, Springfield, Massachusetts, in 1891. The game was introduced into various clubs, colleges, Y. M. C. A.'s, and athletic clubs. The original thirteen rules—horizontal goals ten feet high, the round, large ball, prohibition of tackling and bodily contact, throwing of the ball in any direction, no running with the ball, no holding, pushing or striking an opponent, the throwing in of the ball from out of bounds, and no personal contact—are still the main parts of basketball today.

My first introduction to the game was in 1900. We played the game, as youngsters, in any place that had a small space and two baskets. Church basements were the favorite places. How well I remember the baskets, close to the ceiling, and sometimes in the two corners of the small halls. It did not take us long to learn to throw the ball hard at the ceiling, and see it bounce and re-bounce on the rim of the basket, and fifty percent of the times drop in for a score, for the ceiling was very close to the basket, sometimes only two feet above it.

The best teams in the east those days were Yale University, the old Cambridgeport gyms, the East Boston Athletic Association, the Newport Naval Training Station, the Buffalo Germans. Colleges were slow to take up the game, probably because of lack of coaches, but high schools began playing, and in about 1906 colleges recognized it as a fine winter sport.

Basketball had many obstacles to overcome. Colleges made rules of their own, as did Y.M.C.A.'s, athletic associations, churches, and high schools. These various athletic clubs and colleges finally agreed in the early 1930's to have one set of rules. The dribble was one point no two teams could agree on. Usually, before each game, there were many long discussions, and sometimes heated arguments on the dribble. Some wanted the broken two-handed dribble—where a player could dribble two hands, stop, then dribble again, stop, change direction, and dribble again; some wanted the two-handed unbroken dribble, and some wanted the dribble which is now in vogue. So, usually a game was played with a compromise, one period with one kind of a dribble, the second period another, and the third another. Try to understand that the games were played in two fifteen-minute periods, with a five-

minute rest, or in three fifteen-minute periods with a five-minute rest between periods, with a change of rules each period, and one can visualize the difficulties which confronted the coaches and players.

As we know, peach baskets were the first goals. My first recollection of baskets are iron rims with nets tied at the bottom, as the rules stated that a basket to count must stay in the net. In some places, a stick was used to poke the ball out, other places provided a ladder, or there was an arrangement to pull a string to let the ball out through the bottom in some games. The size of the baskets was, at most places, eighteen inches, but in several gymnasiums in New England the baskets were smaller. In 1911-1917, when I coached in high school, my team had shots at wooden rims and larger baskets.

Backboards were at first just wire screens. Here again, what an advantage the home team would have in its home gymnasium. Wood followed, but the home team would make it so that some boards were loose and some nailed hard. In about 1910, glass was chosen. Gymnasiums with these boards still had an advantage so in 1916 a rule was inserted in the book that backboards must be painted white. Madison Square Garden, Convention Hall, Philadelphia, and Boston Garden, Boston, Massachusetts, all have glass backboards with a square or rectangular strip of white tape or a painted white line above the basket.

Generally, the rims of the baskets are painted black, but in the large arenas mentioned above they are painted orange. Most good gymnasiums have a fine, curved net that stops the ball momentarily as it falls through. This is an added advantage over the old nets, as spectators even a short distance from the basket could not tell whether the ball went through the hoop.

What would coaches of today think of shooting baskets with no backboards? Well, in many gyms, we had to shoot without any. The basket was put on a ten-foot two by four, and the basket suspended three feet out on an iron rod. Remember, the net was tied, and some of the baskets were fifteen-inch ones. And, try to think of the dance hall, gymnasium or auditorium where this arrangement was used. The basketball court was boarded up three or four feet high all around the hall. Netting was then hung all around the floor space to a height of ten feet. In

the game there were no outside rules, the ball was always in play. Here were no backboards, the broken dribble, and you could take more than one step. There was no shooting for fouls. If your team fouled the opponents nineteen times in a game, it counted six points for the opponents, since three fouls counted as one point. Because of no backboards, I am of the opinion that the first coaches in colleges and high schools taught players to have both feet together and to shoot the ball with the high arch. The only time you knew you scored from a distance was when the ball landed in the net. We found out that if you did not arch the ball just right, and did not have your feet together the chances of a goal were slim. If one foot was in advance of another, a right-handed player used too much pressure on his right-hand and a left-handed player used too much pressure on his left hand. About all the good, long, set shooters do it now, and I still want my long shooters to shoot that way. It may be wrong, but we old timers must be shown.

Playing spaces and gymnasiums have improved. They have progressed from floors with no lines at all, fenced-in nets, round courts, where you could not shoot from the corners because of a running track or gallery, places where you had to shoot through the rafters, irregular courts, and gymnasiums with two two-inch iron posts in front of each basket, to the rectangular court of today.

To return to baskets for a moment. In some gymnasiums, they were attached to the wall, and the "smart" youngsters we had were "thinking" all of the time. So, when a player received a pass, one foot hit the wall, and he jumped high so that he would "dunk" it into the basket. Now, this was a common practice, and in college we had to play in such a hall at Rhode Island State until 1925. But, you could not run up the wall. In 1917, a rule was inserted stating that if a player stepped on the end line which was directly under the basket, he was out of bounds. The two-foot end line, and now the four-foot one, ended many a stormy battle as to whether a basket were scored.

Uniforms consisted of an old short sleeve shirt, a skin tight jersey, a short khaki padded pant, and a wrestling suit with feet in it. Everyone wore stockings, and hip pads were sewed in the pants. Knee guards were common to all teams. The suits and warm-ups of today are a vast improvement over the makeshift suit of yester-year.

Probably the ball and shoes have undergone less change than any other item of the game. The size of the ball is about the same, the weight has been increased just a wee bit. It was the old Association Rugby football that was used in the beginning of basketball, and we in America had to catch up with England as the latter had a great rugby ball which was used as

(Continued on page 75)

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New Trier Shows The Way

By Edgar B. Jackson

New Trier High School
Winnetka, Illinois

I HAVE been asked to write a resume of "The History of Swimming at New Trier". This history covers a period of almost three decades, twenty-nine years to be exact.

In 1917, New Trier boasted a three-year old pool, 25 by 60 feet, with a balcony for approximately one hundred spectators. The swimming coach, at that time, was one of the finest in the country. This coach had developed some very fine performers and, as far as competitive swimming was concerned, New Trier swimmers in 1917 ranked with the best in the country. When this coach received another appointment and resigned, the school was without a swimming mentor. The school board and athletic director, examining my application record, discovered that I had done some teaching of swimming in my former positions. I was given the coaching job until a new man could be found. I guess they have never found him, because I am still on the job.

During the winter of 1919, I found that a teacher's day was too short, and so I invited a few grammar school pupils to visit the pool for lessons on Saturday mornings. I selected youngsters who could not swim at all, and included two polio cases. Two or three of our interested high school students volunteered to assist me, and all of us waxed more enthusiastic each succeeding Saturday. Thus, started a program of grammar school swimming classes on Saturday.

For eight weeks, during the summer of 1920, I gave lessons to as many residents of any age as I could entice into the pool. Again high school students assisted, and we were all inspired with our success. This

THE accompanying story of progress in swimming concerns only one school, New Trier at Winnetka, Illinois, yet it contains the background and development of a high school swimming program which has every factor essential to the success of an all-inclusive program for any school.



New Trier's first mixed splash party in November, 1936. Ninety boys and girls enjoyed pool facilities that day

was the start of our present summer swimming school.

About this time, I was convinced that, although there is a definite place for competitive swimming, residents of a community are much more interested in having their children swim well than to be aware of the fact that the local high school has a championship team. I made up my mind that it was the high school's job to do a good piece of work for both of these groups.

Following, are a few items that seemed important to me at this time:

Although, back in 1917, I had not asked for it, I was teaching what I believe is one of the most important phases of physical education. Swimming is a sport which anyone can learn, when once mastered it is never forgotten, and one never becomes too old to enjoy it. The sport is the king of recreative and democratic sports. Did you ever see a solemn group of swimmers?

I began to wonder—if swimming was so important—why, in far too many schools and institutions, the pool, the pool equipment, the swimming program, and the man in charge, were not considered until after every other phase of the physical education and athletic departments had been taken care of. I decided, either to raise this sport level in our school to that of other sports, or someone else could take over. I could not be satisfied to "fuss around" a smelly pool, battle inadequate and leaky showers, spend hours in a poorly ventilated place, sitting on a chair while playing nurse to a few general swimmers, most of them in the shallow end. Fortunately, our far-seeing school board did not want me to do this.

Our last decade of swimming history at New Trier started in October 1936, when our present natatorium was dedicated. New Trier's natatorium is 60 by 75 feet, has 15-foot side decks, and 20-foot end decks. Four low, and two high boards, are

available with an adequate depth of water of ten and one-half feet. Balcony seats will seat 1,200 comfortably, although on two occasions we have crowded in more than 1,500. Lockers and showers are available to accommodate more than 300 persons. Water is refiltered every seven hours. A very fine acoustical ceiling makes teaching a joy, although a built-in public address system is available. Four contestants' rooms, with plate glass windows, accommodating twenty in each room, permit swimmers to keep warm during swimming events. Many additional items of interest are a part of our equipment but space will not allow me to enumerate them. Suffice to say that for teaching useability, I can not visualize a better set-up.

The backbone of our swimming organization is the New Trier Guard. In 1936, when our new natatorium was open for business, the big expanse of water reminded me of a lake, and that first evening, at the dinner table, I promised my family a canoe trip on Lake New Trier. I knew very well, as I visualized the program I desired to put into effect, that no school could afford to provide me with the help I would need. My method of teaching and conducting groups calls for "help galore." I checked over my list of enthusiastic high school swimmers, and selected twenty-five of the most reliable, clean minded, loyal boys. We held a meeting, and I told them I needed their assistance to tackle the job of teaching every high school and grammar school boy and girl in the township how to swim. They were told that this group was to be a service group, no letters would be awarded, no special privileges given and no press notices. They would get nothing except the satisfaction that "service" awards one. Without exception, the lads approved the idea and with true high school level enthusiasm agreed to be on call any afternoon, any Saturday, any evening, except when the



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New Trier's first organized Guard, October, 1936. In the top row, from left to right, are Reynolds, Hale, Mallen, Sullivan, Morris, Rowe, McJunkin, Buenger, Follansbee, Vernon, Gershanow, Kingery, and Spinney. In the bottom row, from left to right, are Wilder, Hinrichs, Bennett, Henschel, Garretson, Davis, Shabino, Ellis, Drucker, Watt, Neilson, Jones, and Coach Jackson. Later, all but two of the above swimmers were stars on college teams, and the following were team captains at their respective colleges: Bennett, Yale; Henschel, Kenyon; Davis, Annapolis; Shabino, Wisconsin; Drucker, Harvard, and Follansbee, Ohio State

call interfered with their scholastic or home responsibilities.

Earlier in this article, I mentioned that I had started a few grammar school pupils coming on Saturdays for lessons. Our new pool is ideal for such a project, and after its dedication we arranged four classes to meet each Saturday during the school year. We now accommodate from 100 to 300 grammar school boys and girls every Saturday. It seemed fair to allow the residents of the township an opportunity to enjoy their natatorium, and so we opened the pool for mixed adult recreational swimming on Wednesday nights. These groups run from 60 to 175, depending, as do our Saturday classes, on the time of the year and weather conditions. Our really large outside project is our summer swimming school. Last summer more than 2,000 persons were a part of the school. Most of our pupils are children from six to fourteen years of age. Classes for children meet twice a week, and they are given three splash parties during the eight weeks.

Swimming for High School Physical Education Classes

During the school year, the use of the natatorium is equally divided for class work between the girls and boys department. The boys use the pool the first seven weeks in the fall, and the last eight weeks in the spring. Two periods of swimming are required each week of all boys during these sessions, unless the pupil is excused by a physician. For more than ten years, competitive swimming, as such, has had no place in our gym class routine. All competitive swimming is done after school, three days a week. Girls have the other two days. Our general plan is to

teach beginners, concentrate on swimming techniques for the mediocre performer, and drill our better swimmers in life-saving, advanced swimming skills, and novelty events. Guard members assist in all classes with beginners. They also demonstrate skills too difficult for the director in charge. Our gymnasium classes are groups of from seventy-five to one hundred. On the first day the class meets, boys are divided into A, B, and C groups. The A group is composed of boys who are able to pass the following test:

Swim 100 yards in good form, using the crawl, two back strokes, left and right side stroke, with one hand raised above the water; swim under water for 60 feet, and jump or dive from the high board. The B group must be able to pass the same test, but only for one-half the distance. The C group is composed of the remaining boys. A definite practice routine is followed by all three groups for the entire period. General or free swimming has no place in our classes.

We gave all our gym classes the Red Cross Swimming Skill Tests in October, 1945. All boys in school took these tests, except those excused because of football, basketball, colds, and those absent on that day. Of the 913 boys tested, the following received certificates: Advanced Swimmer, 123, Swimmer, 516, Intermediate, 163, and Beginner, 88. Only 23 failed to pass. Of those qualified as Swimmers, 460 passed the advanced test, but did not have life saving cards required for the advanced test.

Our school opened last September, with an enrollment of 1,150 boys. We held our swimming squad trials from October 15 to November 15. More than 300 boys received a chance to try-out twice in any

event they cared to select. It is necessary to go through quite a routine to become a squad member. Whether in a gymnasium class, during after-school swimming, or at any other time, we do not ask boys to come out for the squad. I have not asked a boy to come out for the squad during the past ten years. How do we get them? We place a notice in our daily bulletin, and a sign on the gymnasium bulletin board, announcing when the trials are to be held. That is all!

We believe that if a boy is not interested enough to report for the trials, he is not interested enough in the organization to be an asset. Unless a boy is ill on the day of the trials he must report, or wait until the next season. Even squad members of the year before must go through these trials. After our trials have been completed, a list of eligible boys is posted, and a meeting is held, where the coach talks for almost two hours about what is expected of boys in the swimming organization. This talk is not of winning races, or how fast we expect them to swim. It is mainly about sane training rules, seeking right pals, importance of scholarship, loyalty, unselfishness, value of sleep and sane hours, a serene conscience, and many other things including our ten-year old slogan:

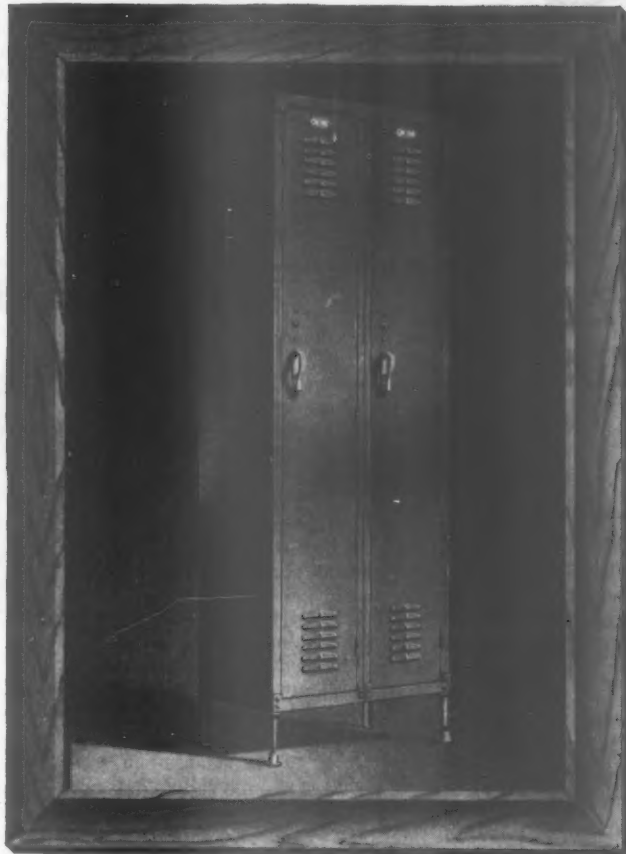
"What I am to be, I am now becoming."

The only item pertaining to their swimming ability is that, in practice as well as in a meet, they must do their best, and not worry about who wins the race. They are then given a questionnaire to take home, fill out, have their parents sign, and return. They are also given a pamphlet "Your Coach's Challenge to You." After listening to my lecture, reading the items in the questionnaire, and going over my "Challenge," if a boy still wants to join, he must return the questionnaire within 3 days.

We like to think of New Trier Township as the "swimmingest" township in the country. We point to our competitive record, the number of swimmers actively involved, and the interest in our swimming affairs. Our competitive record for a quarter of a century is outstanding. We have never had a poor team. Our teams have won more championships in our suburban league than all other teams combined. Here is our record for the past ten years: League Champions nine times. We have not lost more than eight dual meets in seventy-four. We have entered the State meet nine times, and finished third once, second six times, tied once, and won once.

And now, I can almost hear several readers saying: "Jackson of New Trier never seems to get tired of laying it on about his swimming spot." Well, Jackson agrees with you. He is getting more enthusiastic over his spot with each passing year. The job keeps him jumping during school, after school, Wednesday nights, Saturdays, and in the summer, but he loves it!

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The Trainer

His Status, and Obligations

By D. M. Bullock

Head Trainer, University of Illinois

HOW did you happen to take up the profession of training?

I have been asked this question many times. My answer is always the same—because of a deep regard for athletics and competitive sports of all kinds, a liking for youth and excitement.

For more than a quarter of a century, I have been athletic trainer at the University of Illinois, starting as an assistant in 1913. I have noted many changes in all sports, perhaps excepting baseball. There has been improvement of considerable consequence in equipment, and other sports facilities. But, “the hit and run” still remains the same.

The fact that one loves sports does not qualify him as a competent trainer. His requisites are these: He must have a thorough knowledge of anatomy and physiology. He must be a student of human nature, a good psychologist. His sense of humor has to be such that it will enable him to cope with all students. He must be morally sound, intellectually honest, have a cool head, and the ability to be mentally alert at all times. He needs a strong and healthy body which will enable him to perform any type of drudgery which might be helpful to athletes.

Add to all these qualities that he must be thoroughly loyal to his organization, and that he should ever be mindful that things must be done right for safety of those participating in athletics.

The college athletic trainer should help others always, be unmindful of self-glory, yet derive high personal satisfaction from success of those to whom he may have been helpful.

The profession of training has progressed in a large measure in the last thirty-five years, as have the athletic programs of universities and colleges who now employ regularly a full-time trainer, and an equipment manager.

During early years of my training there were many fine men engaged in this work in the Big Ten Conference. Being young and new in the profession, I sought to become acquainted with other trainers so that I might learn their methods and systems of caring for college athletes. Visiting these schools as a trainer, one seldom met anyone connected with a school except the person, usually a student, who assigned dressing room space.

Many trainers at the time felt they possessed secrets not to be divulged to a rival team, or to anyone connected with it, since

the opponent might benefit by a secret formula or specially devised protective equipment. The situation is quite the reverse today. There are no closely-guarded secrets among trainers. All are generous



D. M. Bullock

in sharing findings with others so that athletics in general may be benefitted.

Visiting teams are extended utmost courtesy, as are their trainers and managers. Larger schools take pride in training quarters and use of modern appliances in treatment of athletic injuries. Greater stress has been placed on the training department, and knowledge of its value was demonstrated in the last war when the Army and Navy, maintaining gigantic athletic programs, sought the nation's finest trainers. Training equipment and training quarters maintained by the Army and Navy were the best obtainable.

Care of athletes and work of trainers has been greatly improved through efforts of schools of physical education whose programs, such as that at the University of Illinois, include required courses in anatomy, physiology, and hygiene. This gives competing students and future coaches a more thorough background and understanding of injuries, their causes, and how they should be cared for. Diagnosis is easier, when backed by knowledge, and treatment can be prescribed which will lead to speedier recovery.

In recent years there has been an unprecedented demand for qualified and experienced trainers. The trainers of years back were hard-working men who paved

the way for development of many modern devices used by persons in the profession today. Another contrast is that modern trainers devote their lives to their work. In the early days there were many part-time trainers and coaches. They were not vitally interested in the future or in the advancement of training as a profession. Many were ex-athletes, near-managers, or promoters who did not arrive at their aspired career, but wished to remain in sports no matter what the capacity.

Today there is no difference between the college or professional trainer in how he goes about his job or in the manner of treating injuries. The college man, of course, has a greater variety of sports to handle. The professional trainer is more likely to specialize for football, baseball, or boxing.

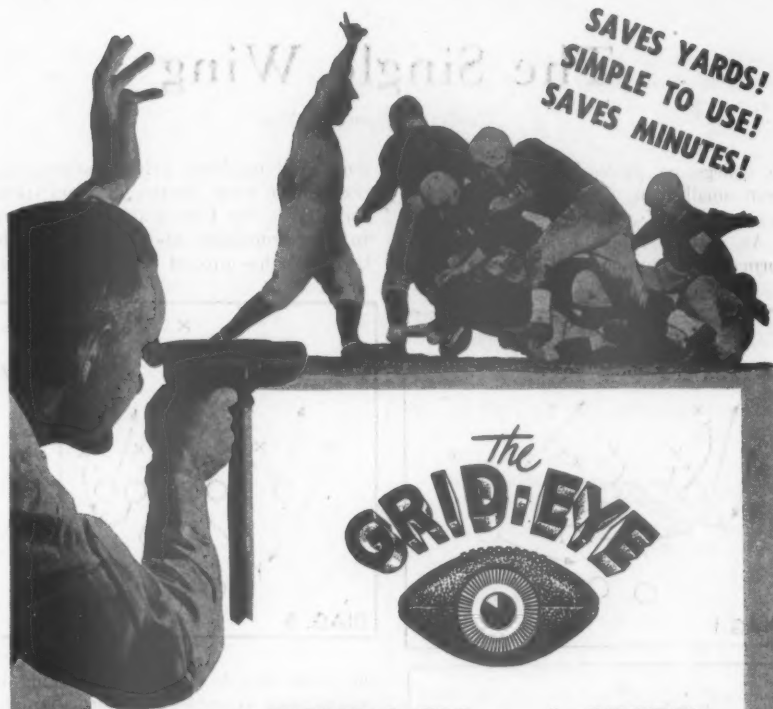
Younger men entering training work must learn a lesson which experience has taught me. One must be on guard constantly for safety of the young and inexperienced candidates who are willing to sacrifice much to become college athletes.

Practically all schools today have on their staffs either a full-time or part-time team physician. A rather rigid physical examination is given any boy before he is permitted to try out for a team. Due to the fact that there are greater numbers of candidates in large universities and colleges who try out for inter-collegiate teams, it is necessary for these athletic departments to maintain a large and efficient organization to safeguard students.

In many instances it is not found advisable to permit a boy to participate in some of the more hazardous sports. But, at the same time, it is often true that he is physically qualified to participate in some inter-collegiate sport which is of less hazardous nature. This calls for intelligent advice and good counselling both by the physician and the trainer.

Many times it is a matter of protection for some abnormal condition found in the candidate by an examining physician. The student still may profit by competition in sports, but the trainer must devise some method—which must be approved by the physician—to protect the boy so that he can continue to compete. Any conscientious trainer who has been instrumental in helping an incapacitated or injured candidate to continue in inter-collegiate athletics is naturally proud of his achievement and of the success of the athlete. Many have been the cases in which trainers have been able to solve physical difficulties to allow boys opportunity to derive the fine things from competitive athletics.

Athletic training has made great strides during my tenure at Illinois. Naturally, to believe that we have reached perfection is foolish. Progress will continue, and men interested in this field should prepare themselves to render service in a fast-changing world. But, mark my word, "the hit and run" in baseball will be the same.



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The Single Wing

(Continued from page 16)

in college or professional football have been small men, playing on single wing teams.

At various times, I have used other formations including the T, the single wing,

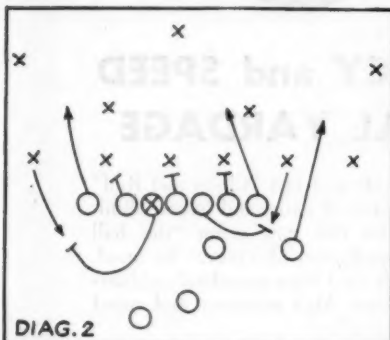
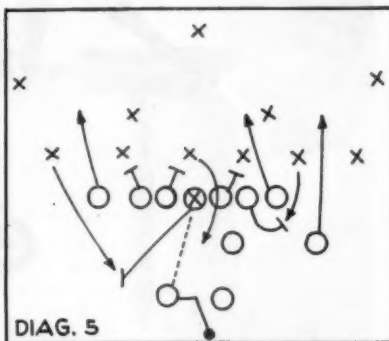
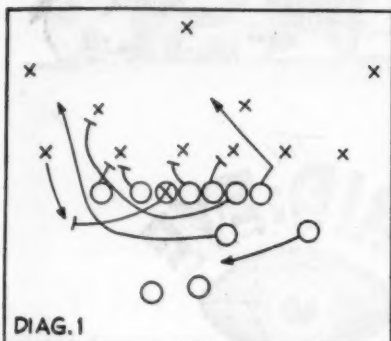
from a balanced line, a close double wing, a deep single wing, short punt, and spread formations, but I have always come back to rely principally upon the single wing because it has proved to be more consist-

use of double blocking on bucks, in short gain situations, when such blocking is advantageous. Two men are available to work on the tackle, on the end, or on both if such blocking is desired on off-tackle plays. It makes possible the greatest amount of interference ahead of the ball carrier. It permits the use of a blocking back, ahead of the ball on line bucks, and it permits better mouse-trapping plays than any other formation.

It offers strong advantages in forward passing because:

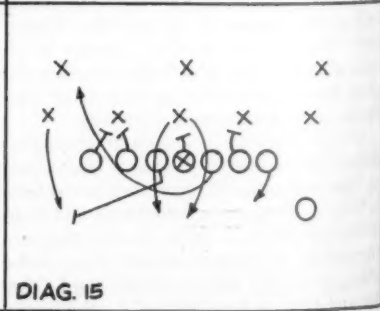
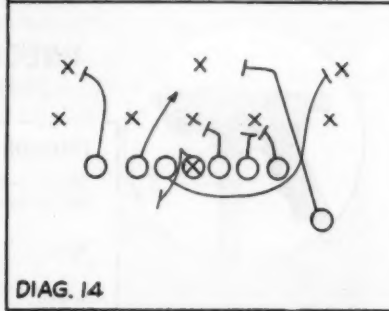
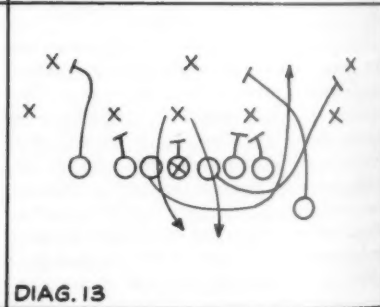
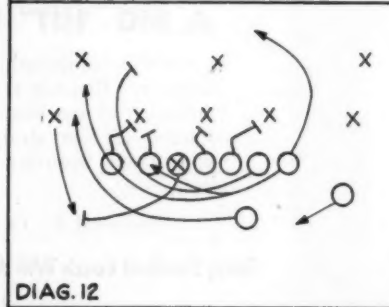
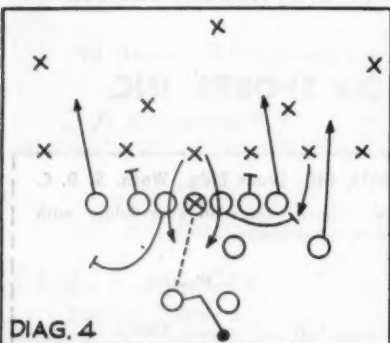
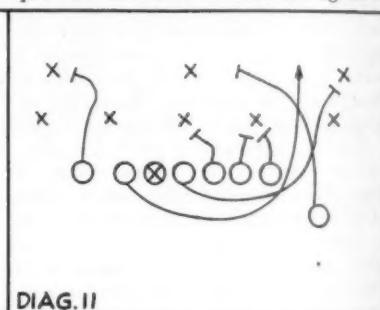
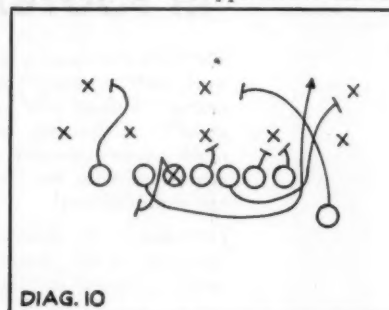
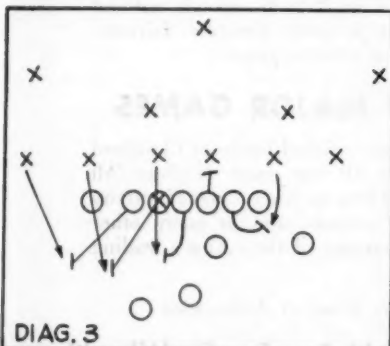
Opponents cannot hold up receivers without weakening themselves against other types of attack. It offers the soundest protection for the passer. Forward passes can be well-masked, as rushes, by the use of running passes, reverse passes, spin passes, and fake reverse passes. Two backs are in position to pass quickly, and without moving from their original positions.

Two backs are in position to perform as spinners, and fakes are available in three directions at once, forward and to either side, so that deception may be best used to draw defenders out of position, or to keep them out of position on plays going in any direction. The location of the backs provides the most efficient timing on re-



ent, more flexible in meeting changing defenses, more versatile, and more adaptable to whatever type of talent might be available.

It affords the best opportunities for the

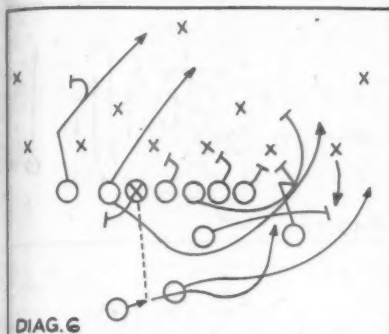


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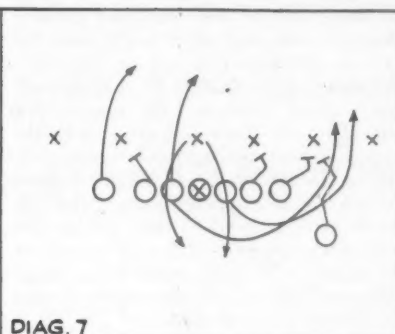
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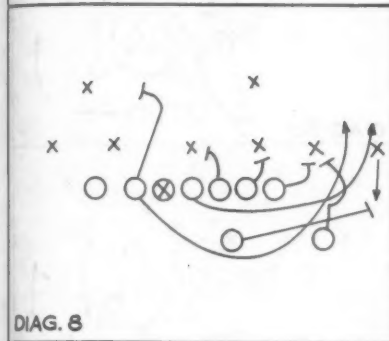
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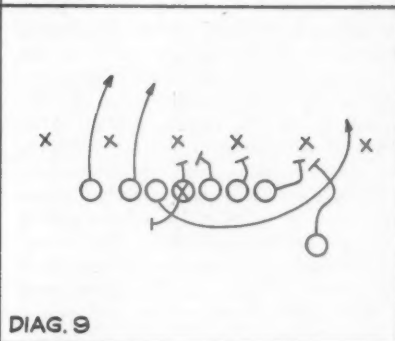
DIAG. 6



DIAG. 7



DIAG. 8



DIAG. 9

this point is by no means weak, although probably not as strong as from the balanced line. Consider the plays illustrated in Diagrams 6, 7, 8, and 9.

These diagrams showing blocking on end run and off-tackle plays illustrate how the unbalanced line permits more interference and better blocking angles. They show that the most efficient blockers may be used to best advantage, and that the center can be given an assignment which he should perform easily, and so release a more efficient blocker for use downfield or in the interference; combinations which are impossible with the balanced line. Diagrams 10, 11, 12, 13, 14, and 15 illustrate blocking against a five-man line.

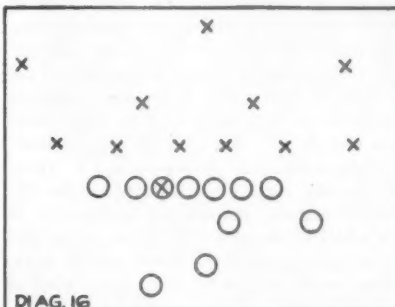
Meeting changing defenses is one of the principal problems of the offense. Every team should have a number of plays which can be run against every conceivable type of defense. A team should not have more than a very small number of plays which cannot be run well against several of the most common defensive alignments. Every team, whether it uses the huddle or calls its plays from formation, should be prepared to make a quick change in its signal, up to the instant the ball is passed,

verses, fake reverses, spinner plays, and so on. It offers the best possible set-up for buck laterals, and fake buck laterals, strong reverses to either side, and fake reverses in all directions.

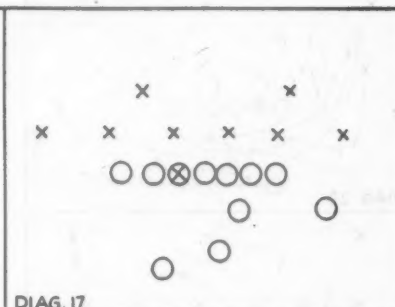
Because of its versatility, as well as good blocking angles against all types of defense, this formation has splendid goal line power. It is an excellent formation for the quick kick. It is the best formation possible to relieve the center of difficult blocking duties. It is exceedingly adaptable, even more so than the T formation, to flanker plays, man-in-motion plays, and floating wing-back plays.

The T formation has an important advantage in the fact that the center in passing to the quarterback keeps his head up, and is not at great disadvantage in blocking. In all other offenses, one serious problem on running plays and pass protection is to relieve the center of difficult blocks, until he has time, after passing, to get his head up, and get position or stance for blocking. I find that against certain defenses, he can do better after pulling out of the line, and that this is more feasible from the unbalanced than the balanced line, because his position is closer to the flank. The blocking combinations shown in the Diagrams 1, 2, 3, 4, and 5, illustrate this point. The various combinations on each side of the line can be called by a simple word, or letter signal, uttered by a lineman on each side, after he observes the alignment of the defense.

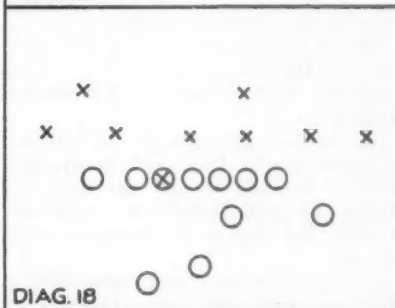
I believe that the unbalanced line offers the strongest possible attack on the ground at every point in the defense except inside the weak side tackle, and the attack at



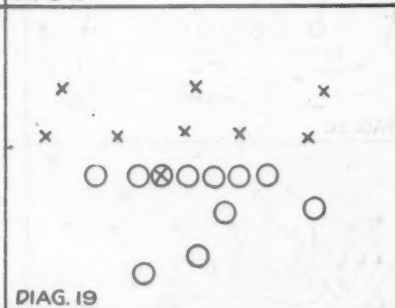
DIAG. 16



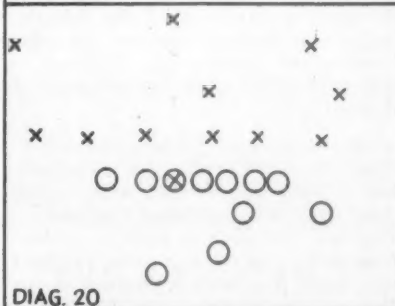
DIAG. 17



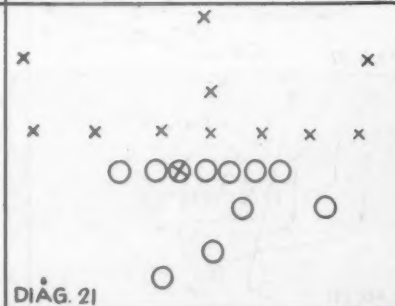
DIAG. 18



DIAG. 19



DIAG. 20



DIAG. 21



in the event the opponents line up in a defensive formation which might make the original play called unworkable. By special signal, or by the way in which he calls his starting numbers, the quarterback should inform the entire team as to the type of defense the opponents are employing, so that the interferers will know where to look for their opponents, know the hole to be attacked, and so that the linemen will understand any switches in assignment which they must make, without all of them standing up to look the situation over, thus causing all kinds of confusion.

The standard types of defense to be expected are the normal six, the over-shifted and under-shifted six, the five-man line, the seven-man line, and the double under-shifted six which are illustrated in Diagrams 16, 17, 18, 19, 20, and 21. Most defenses are strong against certain plays, but weak against others, and every quarterback should have a carefully memorized small list of plays to be used against each of the common types. He should use these plays over and over again, until the defense changes. If the quarterback is wise and well-trained, he can almost compel the opponents to play in normal positions. (Diagrams 16 to 21, inclusive.)

Some of the strong play cycles are shown in the remaining diagrams. The cycles of plays have been used in the toughest competition, and have proved to be effective. It will be noticed that a number of the diagrams show a man in motion, or flanker variations. It will be seen that these do not weaken the play in any instance, and in some cases will strengthen it. These variations may aid in spreading the defense—keeping the defense in suspense as to whether the play is to be a pass or run—in placing receivers or decoys, or both, in more advantageous positions on forward passing plays, and in creating more problems for the defensive players.

Shown first is a series of plays on which the tailback receives the ball from center and runs, passes, or hands it off to another runner.

As shown in Diagram 22, the fullback, 3, has an option. Diagram 25 illustrates a forward hand-off reverse, right end optional. Diagram 26 illustrates a wide fake reverse, and Diagram 27 illustrates a wide reverse.

The play illustrated by Diagram 29 is a fake pass and mouse trap. Diagram 32 illustrates a play in which the defensive halfback is isolated, decoying the other backs to the opposite side. Diagram 34 illustrates a play where the halfbacks are decoyed wide.

(Twenty-four additional plays will be diagrammed and explained in a continuation of this article which will appear in the April issue. The additional diagrams will illustrate fullback spin plays, a fullback buck series, a buck lateral series, a tailback spin series, plays with a wingback in motion, and a quick kick series—The Editor)



Recreation, Whose Responsibility?

By Col. Theodore P. Bank
President, Athletic Institute

BASED solely on the slow advancement of community recreation throughout the United States, it appears that in most communities one is justified in criticising his local government, and asking "Why?"

Why hasn't our community designated someone to think exclusively, plan exclusively, and work exclusively to provide opportunities for the best possible use of the leisure hours of all men, women, and children in the community?

Why don't we, in this community, have a leisure-time program for all the people during the entire twelve months of the year?

Why hasn't our community assumed its rightful responsibility to maintain recreation opportunity for all the citizens, recreation supported by public taxation under a department of our local government?

Why hasn't our educational system taught the wise use of leisure time, as well as the academic subjects?

Why hasn't our school board authorized the use of school buildings for recreation after school hours, during seasonal vacations, and in the summertime?

Why hasn't our community government established a planning board to recommend the future recreation requirements of our children, and their children's children?

Why are our local and national governments virtually standing still, thus forcing fraternal, civic, and private organizations to take the lead in initiating, organizing, promoting and, in many cases, financing community recreation programs?

There are communities in these United States that have found some of the answers to these questions. The methods by which they found them varied in accordance with their approach. It was not easy. Individuals and groups of individuals were forced to "sell" local politicians the sound principles and fundamentals of recreation on the basis that such a project would assure their re-election. What a disgrace it is that many of our leaders have not and do not feel that it is a privilege to work to restore and preserve for all the people of America their right to play and happiness.

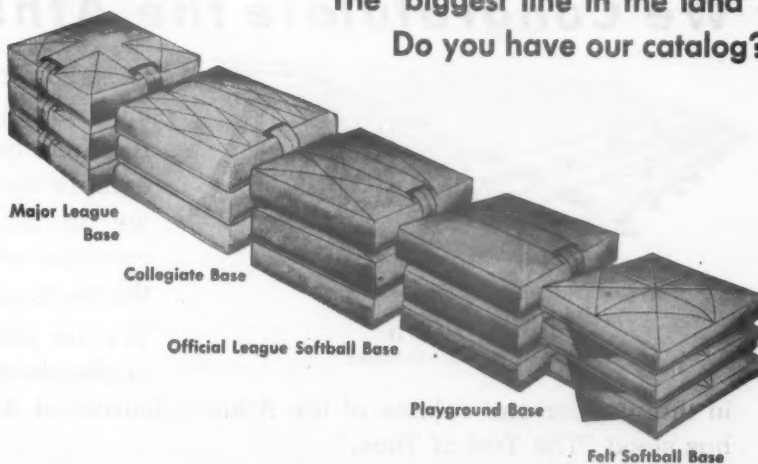
Each of our national and local fraternal, civic, and private organizations, that have unselfishly taken the lead in the field of recreation, is to be commended for its endeavors and its accomplishments. They have contributed considerably toward

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THE MAN WHO IS WISE WILL EXERCISE

placing recreation in its rightful sphere in a democracy.

One such organization is the National Recreation Association, a non-profit, service agency that has contributed immeasurably to the advancement of recreation in America.

For more than forty years, this organization has served as a national clearing house for recreation information and guidance. Without organic relationship and without obligation, it has assisted municipalities, the Federal government, civic, social, and business groups, and individuals who have been seeking expert advice for their recreation problems.

The kinds of service available through the National Recreation Association make it possible for this organization to serve all individuals and groups. Communities wishing to establish or extend recreation programs are given personal service upon request. Training and consulting service by specialists is offered in industrial recreation, games, athletics, girls' work, parks, music, drama, arts and crafts, gardening, nature, rural and school recreation. Instructional recreation publications are disseminated at cost and a consultation bureau is maintained to supply desired information. All of this service is available to any individual, group, organization or government department seeking information and experience on recreation.

As tremendous a job as the National Recreation Association is doing, and will continue to do, the surface to the national problem on recreation is still only being scratched.

Approximately one-eighth of the normal national income is spent for recreation, a major portion of that sum for recreation which is destructive in character, resulting in poor health, inefficiency, absenteeism, and delinquency.

In 1944, only 1,426 out of 6,000 towns and cities in America reported recreation programs and facilities available for their citizens. It is an amazing fact that only a few more than one-sixth of our communities saw fit to provide for the right of happiness of the citizenry.

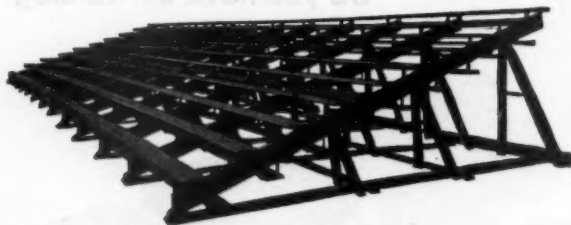
Yes, the surface has merely been scratched. Non-governmental groups cannot possibly do the total job alone. The leadership for the remaining job must be assumed by our national and local governments, but not without the co-operation of every individual and the same fraternal, civic and private organizations that today are of necessity the recreation workers. The problems are obvious. The solutions can be obtained, but only when each of us demand of our local governments that our children, youth and adults be given the opportunity to play.

How Far Is Ten Yards in Football?

EVER since the birth of American football, it has been apparent to many observers that the manner in which games have had to be conducted—with guesswork present in many important rulings—left much to be desired. True, there always will be matters which only personal judgment can decide. The weakest point in conducting a game, however, has been in the mechanics affecting yardage gained and lost, the very heart of the game.

Actually, there has been but little precision under the old methods of setting the linesman's chain and rods, in marking the downs, or gains and losses, or in spotting the ball after incomplete forward passes, out-of-bounds plays, or plays called back. Even in the time-consuming run-out of the linesman's chain for measurements of "first-downs"—a ritual traditionally carried out with meticulous ceremony—there has been merely a well-staged pretense at accuracy. The "galloping threesome" act of the linesman and his two assistants, the holding of the chain on a chalk line, and stretching it for the "measure" results in nothing better than an approximation,

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for its 25 years of progress and achievement in serving the field of sports. It required both vision and courage to embark upon such an enterprise and we are happy that such vision and courage are so amply rewarded by the success attained.

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since every operation that could affect yardage up to that point has been just that.

It would be comparatively safe to say that eighty per cent of the time the chain was not set correctly from the "nose" of the ball in the first place; that gains and losses were not shown properly, and that the point of each down not marked accurately!

For example when an official is trying to spot the football's most forward point, at the spot of the previous down, and all he has to guide him in this naked-eye operation is a point that was set by guess, how far could he miss—six inches, a foot, or even two feet? Two feet would be a slight variation, possible under these circumstances. Working from an average distance of eighty feet away from the sideline markers—half the width of the field—these errors are difficult to avoid, and an accumulation of errors could result in even larger discrepancies. When the ball must be moved in fifteen or twenty yards from a side line on almost every other play there is an even greater chance of the final chain measurement being a far from accurate showing of actual yardage gained.

There have been many times when a measurement was made, and the margin between the nose of the ball and the forward

ward chain-rod was as much as a yard. If the human eye cannot come any closer than this to determining whether the ball was "over" or "short" of the forward marker, it is correct to assume that such margins are a good indication of the error present at times in operations carried out with the naked eye. At times, there are two or three such operations in a single down.

The officials are not to blame. They do excellent jobs for the most part, and under conditions that are seldom favorable for consistently high accuracy.

As one football authority, high in the ranks of officiating, stated:

"I think we all appreciate that our antiquated methods of marking the down, setting the measuring chain, spotting the football, and measuring for first downs are deplorably crude, slow, frequently inaccurate and, at best, unreliable in yardage determinations of vital importance to coaches, players and followers of the game of football."

Finally, after all these years, someone has done something about it! A former varsity quarterback at George Washington University—a man who has coached football for more than twenty seasons as a hobby—M. B. "Bo" Lamar, experienced in numerous optical instruments, has de-

veloped a simple, attractive sighting device which has been named "The Grid-Eye."

The Grid-Eye introduces welcome precision to those all-important mechanics of the game, but even better, it eliminates delays, speeds play, relieves the officials of many naked-eye operations and, assures swift and full credit for every bit of yardage, gained or defended.

One of the most important features of The Grid-Eye is its simplicity. It is almost as simple as pointing ones finger. There is nothing to focus or "fiddle with" during a sight, you merely hold it, and sight it.

Even on a field without yard lines, or with lines obliterated completely by snow or mud, The Grid-Eye, in actual game-use, has demonstrated that it gives the same high accuracy and speed under all conditions.

Yard lines, frequently inaccurate themselves, are not needed or used when operating The Grid-Eye. Such lines should be retained for spectator reference on game fields, but could be deleted from practice fields.

World War II prevented manufacture of The Grid-Eye, shortly after it was demonstrated by its inventor in several games in the Middle Atlantic section. Not to be stopped completely, "Bo" Lamar took The Grid-Eye to the U. S. Naval

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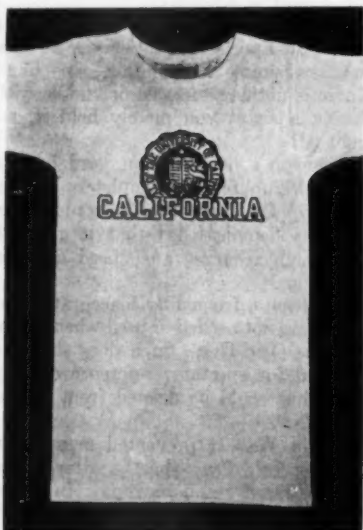
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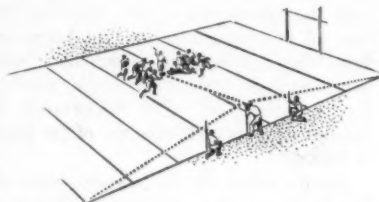
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Academy in September 1942. Captain J. E. "Billie" Whelchel, who served as head coach of football and director of athletics, liked the split-hair accuracy and high efficiency offered by the little device, and engaged it for Navy home games. It has been a fixture in Navy home games in each of the four seasons since that time.

Through its performances in many important games on the Atlantic seaboard and in the midwest, The Grid-Eye has shown to have "what it takes," in both speed and accuracy, meeting every requirement of the modern football game. The Grid-Eye was in the famous All Star Game in 1944, four other all star Classics at other locations, regular season games, in



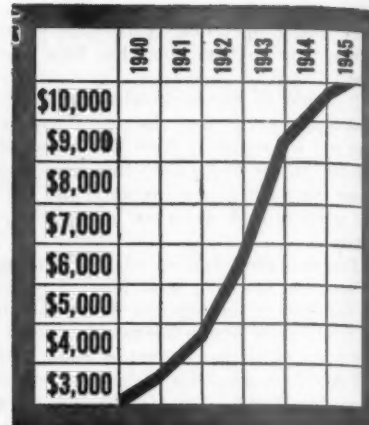
addition to Navy, at Cornell, Duke, Georgetown, George Washington, Georgia, Georgia Tech, Michigan, North Carolina Pre-Flight, Notre Dame, Penn State, Purdue, Virginia, and Wisconsin.

In all kinds of weather and under every conceivable field condition, in night games, rain, mud, on snowy fields, and on fields frozen hard, the "Eye" has more than met every demand for accuracy and speed, never delaying a single play in any game.

So smooth is the efficiency of The Grid-Eye's operation, in conjunction with customary game procedures, that its use almost passes unnoticed. It has been used with complete success in many games where the officials—the referee and the linesman—had no previous experience with it, or had not seen it prior to the game. It requires no rule change. The Grid-Eye does not replace or displace any game official. It is operated by an assistant to the linesman—one who ordinarily handles the "down stick"—under the jurisdiction of the referee and the supervision of the linesman.

The customary rods and chain, used on football sidelines for years are used with The Grid-Eye. The only piece of extra equipment is the Grid-Eye, itself, shaped exactly like an automatic pistol, and weighing less than two pounds.

The Grid-Eye is sighted from the upper end of the rod carrying the down-indicator "box." This rod is especially designed to fit The Grid-Eye, and a box indicator is provided with each instrument. The point of the rod is implanted in the side line stripe, while the sight is being made. The operator sights through the "barrel" of the "gun," and sees at once how far the official has "missed" marking the position of the "nose" of the football. He then adjusts



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the rod accordingly, sighting again if necessary, to set the chain and mark the down correctly or similarly to "spot" the ball.

Sighted from the point occupied by the "fore" chain-rod, The Grid-Eye enables determination of "first-downs" in from 3 to 6 seconds, without delaying the game and, more important, without incorporation of error. With this precision instrument, determination of yardage gained is a precise operation, carried out many times faster than the old "run-out" method. There is a hair line in the instrument which defines a true vertical plane across the width of the playing field from the exact center of the rod from which it is sighted, from the precise spot occupied by the rod's point and exactly parallel to the goal lines, or at geometrically perfect right angles to the sidelines.

When sighted as described, a small precision mirror images in the sight tube a perfect reflection of the sideline stripe, which appears as an "extra" yard line extending out from the point held. This image of the sideline is aligned with the vertical hair line in the sight and the hair line is then an exact perpendicular to the sideline. A small level "bubble" in the instrument tells when the rod is "plumb." The relation of the most forward point of the football to the hair lines governs. It is as if one had a perfect yard line from any point selected on a sideline. Every control over accuracy is in front of the sighting eye.

One can install The Grid-Eye on any football field as quickly and as easily as installing the old rods and chain. One can lay off a football field, use it to test the lines, or to lay out, with accuracy, the lines needed on baseball, track, soccer and other athletic fields.

The only objection heard against The Grid-Eye, in more than four years of use was voiced by an official who seemed to fear that the encroachment of a precision instrument might lessen the importance of his Saturday job during the Fall. He said: "The Grid-Eye eliminates the suspense present in the old run-out of the chain."

To trade all the good features and progress offered by this device for a questionable period of suspense, while three men gallop out and back for a measurement shown to be a "pretense at precision," would be a one-sided track. What football coach or fan, for that matter would want to risk a desired win or an undefeated season, for the sake of "suspense."

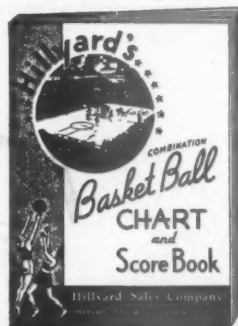
Modern football calls for modern methods. The Grid-Eye seems to be a step in the right direction, toward a more accurate, efficient and better way to conduct football games of the future. Undoubtedly, it is the nearest thing to a "photo finish" which can be utilized during the course of a football game, which does not allow time to take pictures, develop negatives, and make prints.

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LIMITED NUMBER AVAILABLE FOR 1946 FOOTBALL SEASON

WRITE FOR COMPLETE INFORMATION

LEBANON SCOREBOARD COMPANY, MT. VERNON, OHIO

The Notre Dame System

(Continued from page 21)

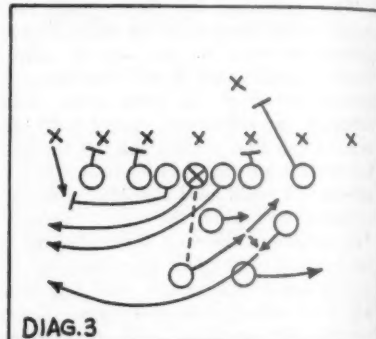
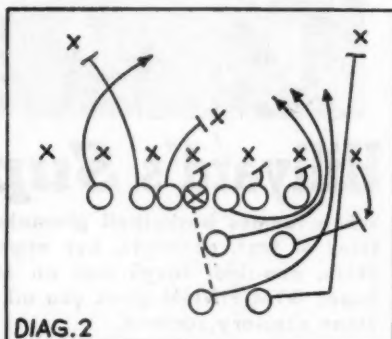
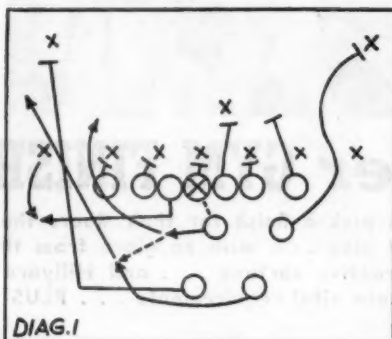
carrying the ball. As we approached the Army goal line, the Army fullback, behind a seven-man line, moved closer and closer to the off tackle spot, until he was almost in the line. We were unsuccessful elsewhere, and our offense bogged down.

Between halves, Jesse Harper designed a pass play to counteract this situation, and we dummy-scrimmaged it in the dressing room. Late in the third quarter on our 30-yard line, Jimmy Phelan, our quarterback, called our special play. I

played fullback, and my assignment was to block the Army left end, who is today Brigadier General "Bob" Neyland. After completing my block, I jumped quickly to my feet to see what happened. I was just in time to see little "Dutch" Bergman, our right halfback, with the ball in his arm, sidestep the Army safety, and go on for a touchdown. This proved to be the only score of the game. Our center who started that play was known by his team mates, and by Notre Dame students, as "Pep-

per." "Pepper" today is the Reverend Fr. Hugh O'Donnell, President of Notre Dame. This play, born of necessity, became one of the standard Notre Dame plays. It is illustrated by Diagram 4.

From this point on, the Notre Dame balanced line box formation, with flexing ends, became our standard offense, and its progress from that point became an evolution with Notre Dame players and coaches, and other coaches who adopted our system, adding their own original ideas and those ideas picked up from other successful coaches and other systems of play. As the shift gained prominence, due to the genius of Knute Rockne, graduates of



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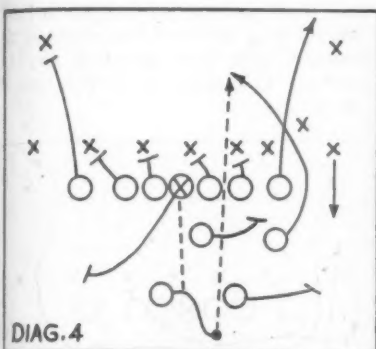
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Notre Dame were in great demand as coaches at other institutions. It was not long before Rockne, football's master salesman, became a clearing house on ideas to improve the system, and football information was being exchanged freely among Notre Dame men. At commencements in June of 1929-1930, Notre Dame coaches gathered in Rockne's office, at his invitation, to discuss various phases of football, particularly our offense.

Probably, during this period of its development, the Notre Dame formation had the best strong-side attack in the history of football. The speed of the shift, combined with the favorable blocking positions of the wingback and fullback, placed terrific pressure on the defensive end, and the shift of the end timed with



the backs, did the same thing to the defensive strong-side tackle. When Jesse Harper left Notre Dame in 1917, to look after his ranching interests in Kansas, he turned over the coaching of the football team and all the rest of his jobs on the campus to his capable assistant, Knute Rockne.

With only a handful of players available in school, because of World War I, Rockne built his team on speed and passing. This was the era of George Gipp, Eddie Anderson, and others. Following the war, Notre Dame gained gridiron



prominence through the genius of Knute Rockne, and a great sports era followed. Those were the days of stadium building, and large football crowds. At this time, Rockne took the old Washington and

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AIRCRAFT ARMAMENT—First book in the world to cover all phases of offensive and defensive air armament. Foreword by Brig. Gen. Coupland, A.A.F. Ordnance Officer. 224 large 8½" x 11½" pps. Publ. Feb. 1945. \$6.00 plus 40c shipping.

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Jefferson screen pass, and adapted it to George Gipp's running ability. This was the famous Gipp to Kiley and Kirk pass. The play is illustrated in Diagram 5.

In 1919, while I was coaching at Northwestern, I picked up the running pass—from the tailback to the wingback—from Howard Jones then at Iowa. This play is shown in Diagram 6. This same year, Dr. William V. Pooley, chairman of our athletic committee, and our football scout, brought back a pass which Dr. J. W. Wiltse was using at Ohio State. The right end, right halfback, and fullback from deep punt formation, flooded the strong-side flat zone. This was tied in with the screen pass, and we had a very effective running pass to a screened receiver, which ended with a blocker in front of the ball. This play is illustrated by Diagram 7.

It was not long before teams playing against the Notre Dame system began to complain about backs being in motion, and the rules committee at every meeting was being pressed by one group of coaches,

headed by Glenn "Pop" Warner, to slow down the shift. Like the T formation today, this subject was a favorite topic of discussion by news writers, and by instructors at coaching schools. On one side of the controversy was the "shifting" group, headed by Knute Rockne, and on the other, the set formation group who looked to "Pop" Warner as their leader and spokesman.

At Kansas State in 1920, I added the double shift. The backs took an extra hop after the first shift, while the quarterback, from a position near the center, either took the ball or permitted it to pass through his hands to the tailbacks. Immediately, we got into trouble with "Cy" Sherman of the *Lincoln Star*, who said we had taken a "leaf from Notre Dame's Book." Eventually the double shift was legislated out of football, and by repeated amendments our shift was slowed down to the point where most of its effectiveness was lost.

In 1922, at Kansas State, Harold Sebring, my right end, later head coach at the University of Florida, and at present a justice of the Supreme Court of the State, designed a pass play which was a development from the inside of tackle, fullback buck, with the quarterback handling the ball. This play is shown in Diagram 8.

The same year in our Nebraska game, we completed twenty-three out of twenty-four passes. One of these passes for a touchdown was not allowed because the backs were ruled in motion by the referee. Most of these passes were the running screen passes thrown by Arthur Starke, our left halfback, to our quarterback, Burr Swartz. From formation left, Swartz, who was left handed, passed to Arthur Starke in the left flat zone.

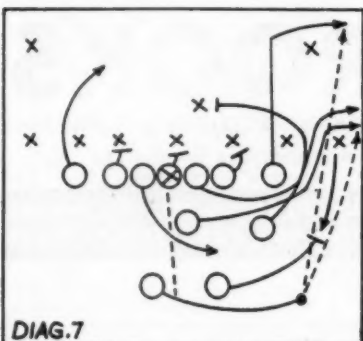
The Notre Dame system of offense during this period was essentially a strong-side formation. With each succeeding year, the tendency of the defense was to shift further and further along until it got to the point where the defensive strongside tackle was an arm's length outside the offensive end, and the defensive guard was in the gap between the offensive end and tackle. The other defensive players were proportionally shifted in the same direction. The defensive fullback played close to the line, just inside the defensive guard.

While the defense was over-shifting widely to stop the famous Notre Dame end runs and off-tackle plays, the rules committee was also doing a good job of pulling the teeth from the fast Notre Dame shift. A rule against actual contact on screen passes, then passive interference, and finally a rule preventing ineligible men from being in the same zone with eligible receivers, crippled the passing attack, but the legislation to slow up the shift hurt even more. The combination of all of these circumstances had us all worried, and thinking.

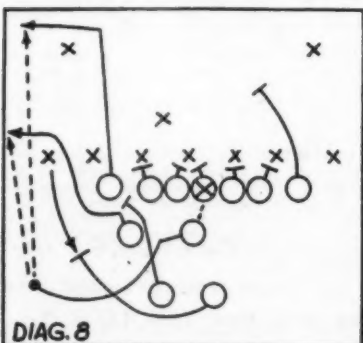
In 1927, at the Drake Relay games, I had breakfast with Knute Rockne. Both of us were "doubling in brass" as coaches of our schools' track teams. He diagrammed the half-spin weak series of plays for me. These plays are shown in Diagrams 9, 10, and 11. This attack was just what we needed, coming at an opportune time. The offense now began to move to the weak side, and away from the over-shifted line. I understand Jimmy Phelan, then at Purdue, had a lot to do with developing this spinner attack, and I think he got his ideas from "Pop" Warner who at this time was shocking all of the "boys" with a terrific weak-side spinner attack from the double-wing formation. In 1929, Rockne diagrammed the full spinner series for me which added still more deception to the offense, and also gave us the end-around play which I still believe, from this formation, is one of the strongest and most deceptive plays in football. It is illustrated in Diagrams 12 and 13.



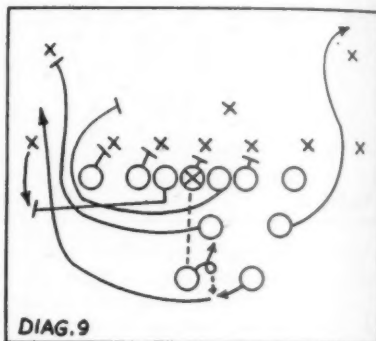
DIAG. 6



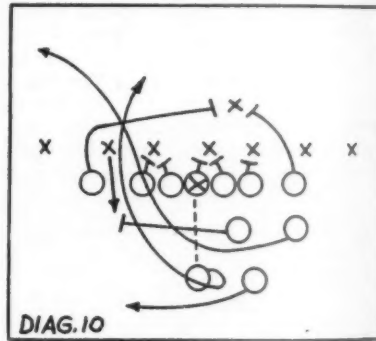
DIAG. 7



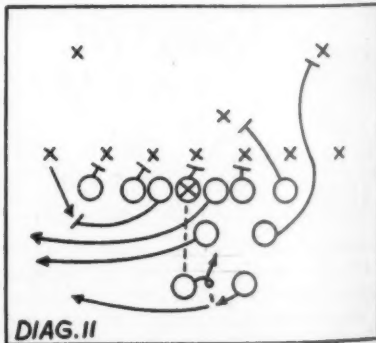
DIAG. 8



DIAG. 9



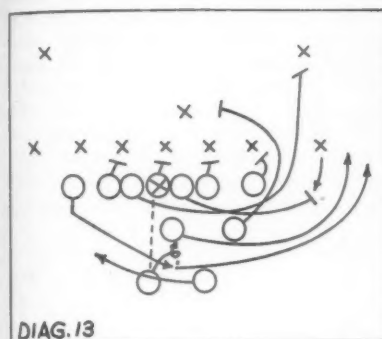
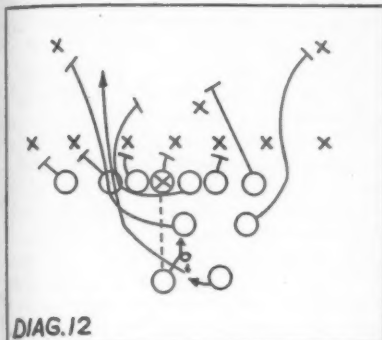
DIAG. 10



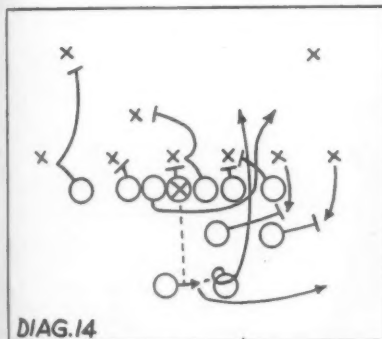
DIAG. 11

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Later, an interesting development of the spin idea, with the fullback supplying the inside threat, has been used in this system by Harry Struhldreher at Wisconsin. It has the virtue of fine deception, with very simple ball handling. The tail-back receives the ball from the center, and starts



wide. As he goes by the fullback, he keeps the ball, or he gives it to the fullback, who spins to receive it. This play is shown in Diagram 14. Using most of the funda-



mentals of the old Notre Dame shift, as the basis of our formation at Michigan State College, we have made a few simple changes in the backfield formation to give us more punch over the center, and to the weak side. We have built our offense on the theory of applying a threat at the middle of the line on each play. Newspaper men call it the "Z" formation, but really it is the old Notre Dame shift, following the march of progress, and adapting itself to our version of the modern trends of football.

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Baseball—Its Future

(Continued from page 34)

which George Sisler, of baseball fame, has been the national commissioner, offers an opportunity for older boys to compete in a nation-wide tournament. This, also, is run on a regional basis, and the winning teams meet each year at Wichita, Kansas, to determine the championship.

The American Baseball Association under the auspices of the A.A.U. has held a national tournament annually to determine a championship team.

The Catholic Youth Organization has done much to promote baseball by sponsoring Junior Baseball. Here, young boys are given an opportunity to play under coaches who stress fundamentals and skills. Leagues were formed, and tournaments played throughout the summer months.

Most all of these organizations, except the American Legion and The Catholic Youth Organization, have been depending on older boys and men for their teams. This is a grand outlet for good talent, and boys in general who are baseball players, but more should be done to teach baseball skills to the boys of grade school age.

The need in America today, as never before, is for more playground facilities. In years past, the vacant lot was used for baseball, but towns and cities have grown so fast that all such available space has been taken for building and expansion. Provisions were not made in most towns and cities to take care of leisure-time recreational needs. With the Atomic age at hand, and its increased short work week around the corner, we must provide for play and recreation.

All boys at an early age want to play baseball, therefore an outlet for this desire must be provided. If this opportunity is not provided, their development in the sport is hampered, along with their own physical and mental growth.

Baseball is the fundamental game of all sports. The skills acquired have a carry-over value to all other games and to life.

Some of these skills are batting, which requires co-ordination of all parts of the body and mind; fielding and throwing, which is a graceful, highly-skilled act; running and sliding, which are difficult to master and require training and nerve;

and position play and game strategy which test the players' mental facilities.

Baseball in high schools and colleges has not been well coached. School authorities in many instances have handed over baseball coaching to some faculty member who has little or no qualifications for coaching the sport. Often a football or basketball coach is given the job in his off season. He has no interest in the sport, and as a result the boys, and baseball, suffer. In any field of endeavor, skills must be acquired and the mind stimulated, otherwise interest is lost. Proper teaching and knowledge of the game of baseball is essential if the sport is going to thrive.

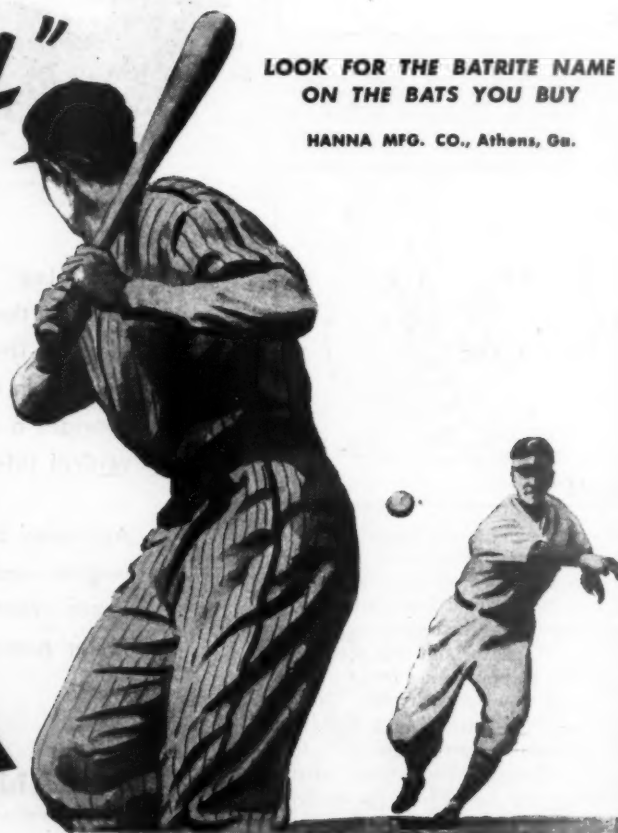
In most college sports, coaches have organized associations for the betterment of their particular field. This was not done in baseball until the summer of 1945 when invitations were sent out to coaches, and a meeting was held at the New York Athletic Club. At that time the American Association of College Baseball Coaches was formed, and Eppy Barnes of Colgate was elected President. Plans were discussed, and numerous committees appointed. The purpose of one committee is to meet with the commissioner and officials of organized baseball, and discuss ways and means of promoting and safeguarding amateur baseball. Major league officials have shown a

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willingness to co-operate since they realize the value of such a plan.

During the war, some colleges dropped baseball from their list of sports. This was only a war measure, and coaches as a whole feel that it will not only come back but will be played by more schools than ever before.

The G.I.—our goodwill ambassador—played baseball all over the globe. As soon as beachheads were secure, a diamond was laid out, and a game was on. Baseball language and terms were used as key signals for attack and other valuable information. Spies were caught because they could not identify various teams, or slang baseball phrases. People in countries where baseball was not played, watched and soon were playing the game.

As a member of a group of coaches who held sports clinics in Manila, Japan and other Pacific Bases, I taught baseball to the G.I. and officers, and their eagerness and enthusiasm was amazing. Japan has been playing baseball for years, and it is their national game. If given an opportunity by their militarists, baseball may in time help develop a type of people who can live peacefully among other nations. The same is true of European countries.

The future of baseball is bright. It has experienced hard days, and has come through with colors flying. Only true and great games can survive tests of this kind.

Baseball, Its Revival

(Continued from page 36)

ers, have gone to the American League and seventy-eight to the National League. Forty-eight of these American League players served in World War II, and thirty-four National League players were members of the armed forces.

Schools and colleges—benefited by the Legion program—also have done their part to place baseball on a deserved plane. More and more, men recognized as proficient coaches are placed in charge, and expert officiating, necessary to proper play and good sportsmanship, is provided. Technical articles for baseball coaches, such as those published by the *ATHLETIC JOURNAL*, are of definite assistance, especially to high school and less experienced coaches.

ANDY PILNEY, former Notre Dame football player, and backfield coach for the Navy's pre-flight school, Athens, Georgia, has been named backfield coach at Tulane University. . . . Clark D. Shaughnessy has resigned as head football coach at the University of Pittsburgh to become head coach at the University of Maryland. As an exponent of the T formation, he had coached at Tulane, Loyola of the South, Chicago, Stanford, and Maryland, before coming to Pittsburgh.

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National Federation

(Continued from page 31)

Interscholastic Records, 1921

- 100-Yard Dash—9.8s.
Ernest E. Nelson, Volkmann School, 1908
Charles Hoyt, Greenfield High, 1913
W. J. Carter, Chicago Univ. High, 1914
Evan Pearson, North Central High, 1916
- 220-Yard Dash—21.4s
W. J. Carter, Jr., Chicago Univ. High, 1914
- 400-Yard Run—42.6s
Frank Sloman, Polytechnic High, 1915
- 440-Yard Run (around turn)—48.8s
James Meredith, Mercersburg Academy, 1912
- 440-Yard Run (straightaway)—48.2s
Frank Sloman, Polytechnic High, 1915
- 880-Yard Run—1m. 55s
James E. Meredith, Mercersburg Academy, 1912
- 1-Mile Run—4m. 23.6s
Ed Shields, Mercersburg Academy, 1916
- 2-Mile Run—9m. 51.4s
Allen Swede, Mercersburg Academy, 1918
- 120-Yard Hurdles—15.4s
H. Whitted, Citrus Union High, 1912
- 220-Yard Hurdles—24.4s
C. Cory, Chicago Univ. High, 1913
Frank Loomis, Oregon High, 1916
David Kimball, Deerfield-Shields High, 1920
- Running High Jump—6 ft. 3 3/8 in.
W. M. Oler, Jr., Pawling School, 1912
- Running Board Jump—23 ft. 7 1/5 in.
P. G. Stiles, Culver Military Academy, 1913
- Pole Vault—12ft. 8 in.
S. Landers, Oregon High, 1916
- Pole Vault (indoor)—12 ft. 1 in.
Eugene Schobinger, Harvard School, 1911
- 12-lb. Hammer Throw—197 ft. 1/2 in.
L. J. Talbott, 1907
- 8-lb. Shot Put (indoor)—59 ft. 3/8 in.
George Bronder, Polytechnic Prep., 1915
- 12-lb. Shot Put—55 ft. 9 in.
A. M. Mucks, Oshkosh High, 1912
- 16-lb. Shot Put—45 ft. 6 1/4 in.
Ralph Rose, 1903
- Discus Throw (7 ft. circle)—139 ft. 5 1/2 in.
B. L. Byrd, 1910
- Discus Throw (8 ft. 2 1/2 in. circle)—145 ft. 6 in.
Clarence Hauser, Oxnard High, 1921
- Junior Discus Throw (7 ft. circle)—155 ft. 4 in.
R. G. Walker, Passaic High, 1914
- Junior Discus Throw (8 ft. 2 1/2 in. circle)—158 ft. 2 3/4 in.
R. G. Walker, Passaic High, 1915
- Javelin Throw—184 ft. 9 1/2 in.
H. B. Liversedge, 1914
- Relay—440-Yards—46.8s
University High, 1910
- Relay—880-Yards—1m. 32.4s
Lewis Institute, 1903
- Relay—1-Mile—3m. 27.2s
Los Angeles High, 1910

pretations which were in vogue in another section of the state. This led to inevitable ill will between communities and between sections. Ultimately, this ill will threatened the welfare of all high school athletics, and at various times there were movements on foot to kill interscholastic contests. In many cases, there was cause for the belief on the part of educators that more ill will than good will was built by school contests between communities. The state associations entered the picture, and began to foster uniform interpretations through machinery which covers each state with a series of meetings in basketball and football, and which permits a state-wide registration of officials, and participation in a training program which eliminates many of the former faults.

These activities led inevitably to a wider use of the *rules publications* in the various sports. This was a nation-wide program, and the state associations acted through their National Federation in setting up machinery for publishing, distributing and using the many rules publications which are now a vital part of the state-wide and nation-wide training program for each of the major sports.

Baseball activities have received attention by the school groups. During the war, this sport was something of a casualty, and many schools discontinued baseball training. The sport has staged a comeback during the past year. There was an increase of approximately 20 per cent in the number of schools using this sport in the school program. Part of this increase was due to the added emphasis given by the state and national organizations. This emphasis has taken several forms. One of the most significant factors was the friendly agreement which has been reached between professional baseball and the National Federation in connection with *solicitation and contract activities*. The agreement provides a heavy fine for any club which engages in contract activities which would cause a high school boy to lose his eligibility. Penalty is also provided for any school official who collaborates in any such dealings. As a result, the abuses which have existed in the past, in connection with upsetting a high school team, and preventing a boy from finishing his high school education, will be eliminated. The baseball program also includes co-operative activities between organized baseball and the state and national high school organization. Instructional and entertaining baseball films are provided for high school assemblies, clinics, and demonstrations. Many state associations now include a baseball department in their coaching school work. Probably the most significant development is the decided trend toward providing some type of *supervision for school teams during the summer*.

Interscholastic Records, 1945

- 100-Yard Dash—9.4s
Jesse Owens, East Technical High School, 1933
- 200-Yard Dash—20.7s
Jesse Owens, East Technical High School, 1933
- 440-Yard Run—48.2s
Frank Sloman, Polytechnic High School, 1915
Herb Moxley, Cent., 1928
- 880-Yard Run—1m. 54.4s
R. L. Bush, Sunset High School, 1933
- 1-Mile Run—4m. 21.2s
Louis Zamperini, Torrance High School, 1934
- 120-Yard Hurdle—14.0s
Joe Babiste, Tucson High School—1939
- 220-Yard Hurdle—22.1s
Don Pollom, Topeka High School—1938
Bill Hamman, Sunset High School—1941
Fred Batiste, Tucson High School—1944
- Running High Jump—6 ft. 7 7/8 in.
Gilbert LaCava, Beverly Hill H. S.—1938
- Running Broad Jump—24 ft. 11 1/4 in.
Jesse Owens, East Technical High School—1933
- Pole Vault (Indoor)—13 ft. 2 in.
John Wonsowicz, Froebel High School—1930
- Pole Vault—(Outdoor)—13 ft. 9 5/8 in.
John Linta, Mansfield, Ohio—1939
- 12-Pound Shot Put, 59 ft. 1 1/2 in.
DeWitt Coulter—Mansonic High School—1943
- Discus Throw (Large)—145 ft. 9 in.
Edsel Wibbels—Wolbach High School—1937
- Discus Throw—(3 lb. 9 oz.)—174 ft. 2 1/2 in.
Howard Debus—Lincoln High School—1940
- Javelin Throw—219 ft.
Robert Peoples—Classen High School—1937
- Relay—440-Yards—42.4s
Frank Wyckoff, Dave Zaun, Fulton Beaty, Rus Slucum—Glendale High School—1938
- Relay—880-Yards—1m. 28.2s
Walter Hopson, Ralph Olson, Clifford Ritchie, James LuValle—Polytechnic High School—1931
- Relay—1-Mile—3m. 21.4s
Emmett Jones, Ernest Oswald, Thornwall Rogers, Rudolph Obergfall—Hollywood H. S.—1929
- Relay—2-Mile—8m. 5.5s
Eugene Hogan, Lowell Baol, Robert Cramer, Kenneth Reesman—Roosevelt High School—1938

Pole Vault

(Continued from page 30)

Swing: As the swing is started, the elbows should be dropped forward so that the pull may be applied along the pole. The body should hang from slightly flexed arms, and swing upward as close to the pole as possible. Lengthening or extending the arms, during the early part of the swing, adds speed to the swing which brings the pole to a vertical position more quickly.

As the delayed pull is taking place, the legs are brought up close to the pole, to a position above the hands, the free leg leading and crossing to the left. Placing the body in a position, so that when the vigorous pull and leg kick are made, the feet will be forced still farther upward along the pole—not outward over the bar—automatically turning the body toward the bar to a hand-stand position directly above the pole. The legs should be kept close together, during the middle part of the swing, then spread to assist in balance in the clearance position.

Pull: The pull and turn are made together. The body is turned by the swing of the right leg across the body, and by the kick backward of the left leg. If the legs and feet are raised high above the bar, the transition from the pull-up to a push-up is accomplished easily. The pole, however, must be allowed to arrive at a vertical position, and the legs should not start to descend until the push-up is started. The pull-up should be complete, so that the arms are flexed, ready for the extension in the push-off.

Push-off: Because the legs and body have been lifted in the swing, to a point higher than the grip on the pole, the push-off is a technique used to help raise the upper body higher in clearance. To be effective, the body must be kept close to the pole, and the pole must be retained until it is in a vertical position.

In the double push-off, the vaulter pushes vigorously with both arms, rotates to the right—directly to a position above the pole—lets go the pole with the left hand, retains his grasp with the right, and draws it closer to the cross bar for an added push with his right arm, as he releases it. This is followed by an upward and over-throw of the arms to clear the bar. The delayed pull requires that the cross-bar, at lower heights be placed twelve to eighteen inches toward the pit.

Clearance: The clearance may be made by what is generally called the "jackknife" method, where momentum is retarded, and the legs dropped quickly, when over the bar, followed by the push-up. Another method is the "flyaway", in which the legs and body are projected forward, without a bar. Still another method is the "arch", where the angle of the body and legs are

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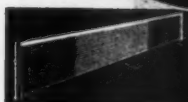
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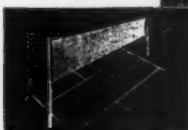
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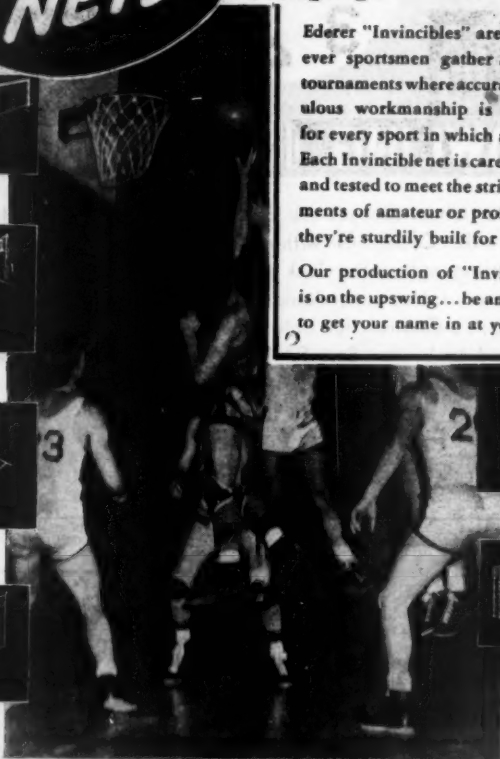
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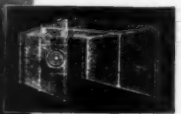


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not sharp, permitting a fast, smooth action to be applied. This is the clearance method used by Sefton, Meadows, and Warmerdam.

Throw-away: The throw-away of the pole is a means of releasing the pole by a flip of the wrist, to prevent its falling forward against the cross-bar. It also is referred to as the lifting of the hands and arms over the head after the release is made. This technique should be practiced more generally. Many a fine vault has been missed by a drag of the arm, after the pole has been released.

Landing: In landing, the vaulter should try to land relaxed, on his hands and feet. But, seldom does he manage to do this. The best coaching a vaulter can receive, at this point, is to provide something soft to land on, not sand nor dirt, but at least two and a half feet of shavings. A few hard landings will cause a vaulter to tighten up, and to lose the necessary rhythm and confidence to complete his vault.

Training: Young vaulters may get the wrong impression regarding practice, when they read that champions only vault in competition. They should bear in mind that these champions have been vaulting ten to twelve years, and that they have perfected their technique.

The preliminary season should be devoted to general body conditioning, and to perfecting technique. Better results will be obtained if practice vaulting is limited to two or three days a week, and that practice on alternate days rather than daily.

During the competitive season, practice should be reduced to one day each week—on Tuesday or Wednesday.

Monday: Assuming that the vaulter competed on Saturday, Monday's workout should be no more than a general loosening up. He should jog a lap at the start and finish, go through fifteen or twenty minutes of body stretching and suppling exercises, a few pull-ups, hand-stands, and three flights over the low hurdles.

Tuesday: After the usual warm-up work, consisting of jogging and suppling exercises, he should vault ten or twelve times, eight times for form, and four for height. He should finish by practicing sprinting fifty yards, with the pole, to develop speed.

Wednesday: The usual warm-up work should consist of jogging, body suppling exercises, pull-ups, hand-stands and push-ups. He should perfect his approach and work out over two or three low hurdles.

Thursday: Easy jogging and suppling exercises should be followed by a light workout of the body and arms. He should run through his approach but do no vaulting, finishing up with two or three fifty-yard sprints.

Friday: Rest. A vaulter should not work hard in practice more than once a week during the competitive season.

Saturday: Competition.

The Modern T

(Continued from page 12)

plays to the left. All these plays, requiring new assignments, double the mental load and physical labor of the player, limiting his capacity for learning plays and, thus, crippling the flexibility of the attack.

For the purpose of simplifying assignments in the modern T, the team is divided into five parts, all of which operate independently. The parts are; the on-side—the side to which the play is going—the off-side—the side away from the play—the quarterback, the center, and the backfield. Most important of these parts is the on-side, for that is where the maximum variations must take place, where the flexibility is needed most.

Contrary to what might be expected, control of the five parts of the team is easy, far easier than the control of eleven men. It is all in the signals.

Many of the nation's top teams use the system of naming the ball carrier, the hole, and, side of the line. For instance: *right half inside tackle, right*. This means that the right half carries the ball, and hits inside the defensive left tackle, to the ball carrier's right. There is nothing even slightly confusing about this signal, whereas a play numbered "37" would force each of eleven men to stop, and think momentarily of what he is to do on play "37," inviting confusion and inevitable messed-up play. Caution should be used in saying *inside tackle, right*. If the signal were, *inside right tackle*, many players would hesitate, and wonder if the quarterback meant the defensive right tackle, or the offensive right tackle. Also, *inside tackle, right* specifically names the hole. It is *inside tackle, right*, and not somewhere in that general vicinity.

To control the on-side, the quarterback simply designates the type of blocking he thinks will be most effective. Adding "X" to the signal generally means he prefers cross-blocking. Usually, "Y" designates straight-away blocking.

If the quarterback wants to spread his line to the right or the left, he simply says *spread right*, or *spread left*. If he wants a man in motion, he designates the man, and where he is to go in motion—*fullback in motion right*, or *left half in motion left*. If the quarterback fails to mention any one of the team's five parts in his signals, each part has only to carry out its standard assignments. The quarterback designates the count on which the ball is to be snapped, by adding, to the whole signal—*on one-two-three, etc.*

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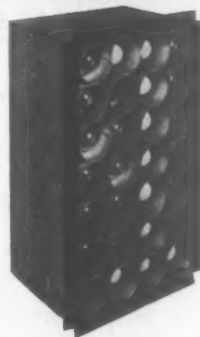
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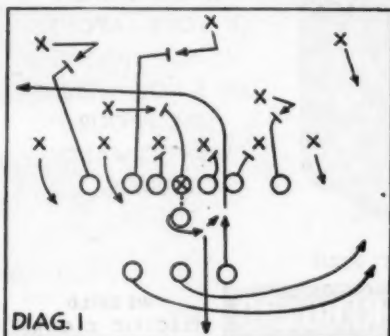
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To be most effective, each of the team's five parts must spend hours perfecting all of the maneuvers which may be required of it. The linemen master their various types of blocks, and practice spreads. The backs drill on man-in-motion plays, ball handling, etc. The five parts drill independently, and together.

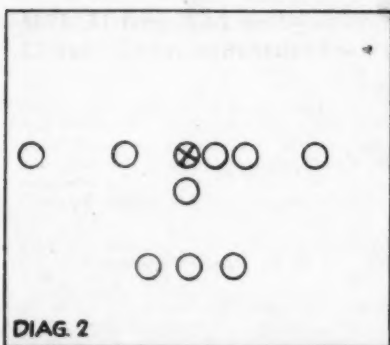
So, actually the modern T formation entails less memory work and less physical labor. It is, therefore, easier than other formations. At the same time, it affords all that is asked of an offense—deception and flexibility.

To illustrate the ease with which flexibility and deception may be obtained with the modern T, I have diagrammed

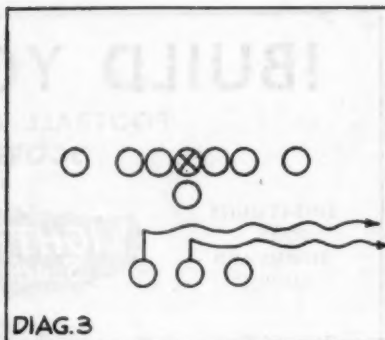


DIAG. 1

five plays—actually one play, with four maneuvers, designed to take advantage of whatever weakness shows up in the defense. Diagram 1 shows the basic play. Diagram 2 is the same play, with a spread left. Diagram 3 is the same play, with a



DIAG. 2



DIAG. 3

half in motion. The fullback could go in motion just as easily. Diagram 4 is still the same play, with different on-side blocking assignments. Diagram 5 illustrates the same basic play, with still different blocking assignments. What defense can stop all five of these plays?

Notice that in the five plays—or the basic play with four variations—not more than three men are affected. The other eight or nine need only to know their standard assignments for a play going at the side of the line. Notice, too, that the only important changes in assignments occur on the on-side.

Some coaches may think that the plays could be improved by making major changes in assignments, other than on the on-side. They are right. But, I have learned from experience that it is better to sacrifice a little play power than to confuse any more boys than necessary with wholesale altering of standard assignments. My advice is to keep as many assignments standard as possible.

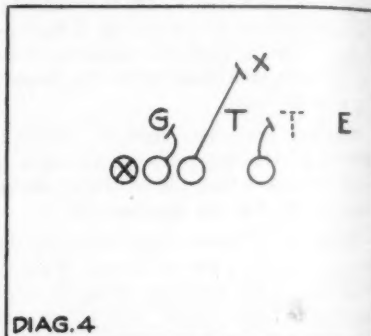
If the two or three key men in the play carry out their assignments well, the play will work.

How far can a coach go with this flexibility in the modern T formation?

This depends entirely on the coach, the experience of his boys, their natural ability, practice conditions, facilities, and assistant coaches. Experienced T formation coaches, with an experienced T formation team, working under ideal conditions, can, of course, exploit the flexibility of the T to

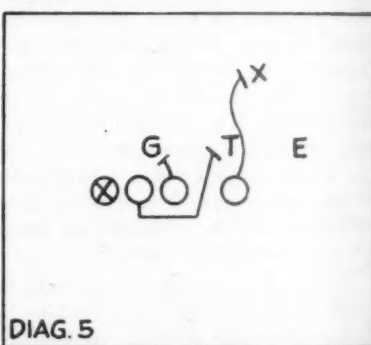
a much greater degree than T formation novices.

We could not win games at Pittsburgh, since we had none of these tools with which to work. Each of my three years there, I was greeted by new, young, and physically immature boys who had had little or no T formation training. If they had returned the next year, we would have won games, because with a year's T training they would have known enough of the T to achieve a high degree of flexibility in their attack. As it was, they played exceptionally well for T novices. I was especially amazed by my 1944, all-freshman backfield which ground out sixteen first downs against mighty Army at West Point.



DIAG. 4

We had poor practice facilities at Pittsburgh. The competition, too, had something to do with our disappointing record. We had to face such recognized football powers as Notre Dame, Illinois, Purdue, Ohio State, Western Conference champion



DIAG. 5

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at Pitts- and some- g record. football Purdue, champion

in 1944, and Indiana, Western Conference champion last year. In these teams, we were encountering much older and more seasoned boys, many of whom were in Naval R.O.T.C. units.

Could Pitt have done better using another system of attack, as was often claimed? Absolutely not! Young boys with little football experience, and far from physical maturity, they had to use a system which was easy to learn and easy to execute, and they made the greatest use of the one thing they had—intelligence. The modern T fitted all their needs. Operating another system of offense, they would have been ground into the gridiron by their far superior opponents, opponents superior in experience, maturity, and size, but not in fight.

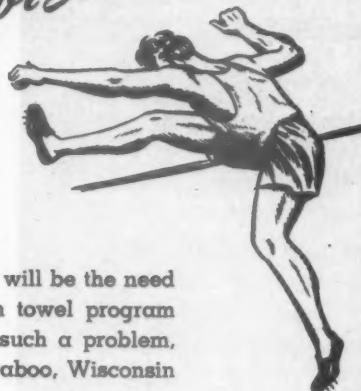
Many of the coaches who are crying loudly that the defense is catching up with the T formation, have not given it a fair trial, or they cannot swing far enough away from the old set T to achieve the all-important flexibility. The modern T requires time to learn, it still is a comparatively new offense, and there are few coaches and boys thoroughly familiar with it.

It took the Washington Redskins two years to capitalize on the modern T's flexibility. It took Notre Dame several years to operate it effectively. Because the turnover in manpower was so great from season to season, Pittsburgh's boys were not able to grasp it to a degree where they could qualify as an efficient T formation team.

Someone may ask why, then, did the Cleveland Rams enjoy such great success with the modern T last season, their first with it. That is simple! Bob Waterfield, All-National League quarterback, had had four years of T training, while playing for the University of California at Los Angeles, under the former Chicago Bear's great quarterback, Bernie Masterson. And the Rams' regular fullback, Don Greenwood, had become thoroughly familiar with the T, while playing with Ray Eliot's T-minded University of Illinois team. These two—the quarterback and fullback—are the key men in the modern-T.

To make their T effective, coaches must forget all they learned about other systems, especially the old T. They must get away from the idea of plays, in which the actions of all eleven players are affected by one signal. The modern T offers all the flexibility in the world, but it is still only an offer. These potentialities must be used before the T can become effective. When they are not utilized—when a coach clings to the old idea of fifteen or twenty basic plays, affecting all eleven men—he cannot hope to realize the benefits of flexibility and deception of the modern T. He is clinging to the old, simple set T. This is the T formation with which the defense caught up years and years ago. There is no reason to believe that it will enjoy any more success today.

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- 220-Yard Low Hurdles—23.6s
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J. I. Wendell, Wesleyan University, 1913
Robert Simpson, Missouri, 1916
- 440-Yard Hurdles—53.4s
(Ten 3 ft. hurdles)
A. Desch, Notre Dame, 1921
- Running High Jump—6 ft. 7 5/16 in.
E. Beeson, University of California, 1914
- Running Broad Jump—25 ft. 3 in.
E. O. Gourdin, Harvard, 1921
- Pole Vault—13 ft. 5 in.
F. K. Foss, Cornell, 1920
- 16-lb. Shot Put—51 ft.
Ralph Rose, Michigan, 1909
- Hammer Throw—175 ft. 10 in.
K. Shattuck, University of California, 1913
- Discus Throw—155 ft. 2 in.
A. W. Mucks, Wisconsin, 1916
- Javelin Throw—193 ft. 2 in.
A. Tuck, University of Oregon, 1921
- Relay—880 Yards—1m. 27.8s
Pennsylvania (S. Landers, F. J. Davis,
W. C. Haymond, E. Smith), 1919
- Relay—1 Mile—3m. 18s
Pennsylvania (F. Kaufman, J. Lockwood,
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- Relay—4 Miles—17m. 51.2s
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Clyde Jeffrey, Stanford—1940
Harold Davis, California—1942
- 220-Yard Dash—20.3s
Jesse Owens, Ohio State—1935
- 440-Yard Run—46.4s
Grover Klemmer, California—1941
- 880-Yard Run—1m. 49.8s
Ed Burrows, Princeton—1940
- 1-Mile Run—4m. 6.7s
Glenn Cunningham, Kansas—1934
- 2-Mile Run—9m. 2.6s
Gregory Rice, Notre Dame—1939
- 120-Yard Hurdles—13.7s
Fred Wolcott—Rice, A&M—1940
- 220-Yard Hurdles—22.6s
Jesse Owens, Ohio State—1935
- 16-Lb. Shot—56 ft. 1/2 in.
Al Blozis, Georgetown—1940
- 16-Lb. Hammer—183 ft. 10 in.
Robert Bennett, Maine—1940
- Javelin—234 ft. 3 1/2 in.
Robert Peoples, So. California—1941
- High Jump—6 ft. 11 in.
L. Steers, Oregon—1941
- Broad Jump—26 ft. 8 1/4 in.
Jesse Owens, Ohio State—1935
- Discus—174 ft. 8 3/4 in.
Archis Harris, Indiana—1941
- Pole Vault—14 ft. 11 in.
William Sefton, So. California—1937
Earle Meadows, So. California—1937
- 35-Lb. Weight—57 ft. 9 in.
H. Dreyer, R. J. State—1935
- Relay, 440-Yard (4X110)—40.5s
La Fand, Anderson, Jordan, Talley, So.
California—1938
- Relay, 880-Yard (4X220)—1m. 25s
Kneubuhl, Malott, Hiserman, Wiener,
Shauser, Stanford—1937
- Relay, 1-Mile (4X440)—3m. 9.4s
Reese, Froom, Barnes, Klemmer, Califor-
nia—1941
- Relay, 2-Mile (4X880)—7m. 34.5s
Reese, Klemmer, Peter, Barnes, California
—1941
- Relay, 4-Mile (4X1m.)—17m. 16.1s
Truitt, Smith, Deckard, Lash, Indiana Uni-
versity—1937
- Sprint Medley—(440, 220, 220, 880)—3m.
23s
Sharp, Matthews, Hodges, Lyda, Oklahoma—
1942
- Distance Medley—(440, 880, 1320, mile) 9m.
59.4s
Chrisman, Morgan, W. Rideout, B. Ride-
out, No. Texas State Teachers—1938
- 480-Yard Shuttle Hurdles (4X120)—58.6s
Jaques, Peck, Baggett, Gatewood, Texas
—1940

The First Twenty-Five Years

(Continued from page 22)

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We believe that the added JOURNAL services will meet with reader approval. That being the case, it would not be too much to expect congratulatory messages on our fiftieth anniversary, messages just as sincere and heart warming as those sent in by many of our readers and advertisers on the occasion of the twenty-fifth anniversary. Typical messages follow:

Fred J. Hatley, Coach, Proviso Township High School, Maywood, Illinois: "The ATHLETIC JOURNAL has been a game partner and companion to me for the last twenty-five years. Its articles are encouraging and inspiring to amateur athletics. It serves best those who read and follow the JOURNAL's policy on its excellent ethical principle and practice of true sportsmanship."

R. E. Damon, Director, Physical Education and Athletic Coach, Fortuna Union High School, Fortuna, California: "A few words cannot express how fortunate we are in having such a fine athletic magazine as the ATHLETIC JOURNAL. Each issue has material of immeasurable value in the field of physical education, and aids in the development of school teams. Your journal has been a great help to me during the past twenty years. The pictures, sketches, articles, and advertisements all go to make up a great magazine."

T. H. Johnson, Coach, Taylor High School, Taylor, Texas: "I consider it an honor to have been a subscriber of the Journal for twenty years. The ATHLETIC JOURNAL is practical, comprehensive, and enormously useful, not only to the coaches who have been in the game for many years, but to the coaches and physical educators who are assuming these responsibilities for the first time. All sports activities are thoroughly discussed, and an equal balance is maintained between the major sports and the physical education program. The illustrations, diagrams, and articles by leading coaches have made a fine contribution in helping to develop amateur athletics, and have been a real service to the coaches throughout the country. The Journal is an aid from a technical standpoint, as well as a record of our athletic development through the years."

C. L. Higgins, C & S Sporting Goods Company, Austin, Texas: "We feel, down in Texas, that the ATHLETIC JOURNAL, distributed to the universities, colleges, junior colleges, and high schools, has done more than any other publication to promote clean and competitive athletic programs."

John C. Myers, Director of Athletics, Salisbury School, Salisbury, Connecticut:

"I should like to congratulate the ATHLETIC JOURNAL on its twenty-fifth anniversary. I have been a subscriber since September of your first year, and have looked forward eagerly to each new issue. It is an invaluable magazine which serves the needs of athletic directors and coaches, and it has been of tremendous service to me both in furnishing me with new material, and with inspiration. I particularly like the way each athletic season is anticipated in the JOURNAL, with splendid diagrams of plays and suggestions for coaching. I am sure these do much to improve the skill and competence of many of your readers. As long as I am teaching, I hope never to be without your fine magazine."

Archie Hahn, Coach of boxing and track, Athletic Trainer, University of Virginia: "My best wishes for the future of the ATHLETIC JOURNAL. It has always been of great assistance to coaches of all athletic activities. I know that I have personally profited much from reading it. May your policies be carried on in the future, as they have in the past. I was one of the first subscribers, and I cannot speak too highly of the great work the ATHLETIC JOURNAL has done."

Bernard F. Oakes, Acting Director of Athletics and Football Coach, University of Wyoming: "I remember very clearly, when the late Major John L. Griffith published the first ATHLETIC JOURNAL, when he was connected with the Department of Athletics at the University of Illinois, and while I was a student there. To those of us who were majoring in physical education, it was a very interesting and instructive pamphlet. I have never missed an issue since. The ATHLETIC JOURNAL has been a valuable guide technically and ethically in high school and college sports all these years. It has been responsible in a large degree for the high position of inter-scholastic and intercollegiate athletics, as we have them today. If the Journal keeps just ahead of the profession, as it has in the past, it will continue to do the same amount of good."

Amos Alonzo Stagg, Football Coach, College of the Pacific: "My hearty congratulations to the ATHLETIC JOURNAL on the celebration of its twenty-fifth anniversary. The world of collegiate sport owes a debt of gratitude to the founder, the late Major John L. Griffith, for his vision in the creation of the Journal, and the wisdom and good judgment with which he developed it. Its articles have been stimulating and thoroughly informative. The Journal has served as a medium for the presentation of up-to-date ideas on the basic skills, techniques, and strategies of various branches of athletics."

Charles W. Bachman, Coach of Football, Michigan State College: "It is unfortunate that Major Griffith is not alive today to receive the acclaim of college and university presidents, athletic directors, coaches, players, and the American sports public in general, for the splendid job he did of presenting to the American people through the Journal the proper viewpoint of competitive sports in relation to sound educational programs. Athletic coaches have profited greatly by the many fine articles on the various sports which have appeared in each issue."

Z. G. Clevenger, Director of Athletics, Indiana University: "The ATHLETIC JOURNAL, throughout its long history, has contributed more to intercollegiate and amateur athletics than any other magazine. Through its superior articles, it has served the coaches and athletic directors as none other has, and it will undoubtedly continue to be the guiding force of the country. It has been the bulwark of amateur and inter-school competition, as a means of developing our young manhood, and thereby developing the American nation."

R. V. Borleske, Director of Physical Education, Whitman College: "I was fortunate to be stationed at Camp Pike, Arkansas during the fall of 1918, while the late Major John Griffith was in charge of the physical education program for the camp. His stately appearance, his gentlemanly manners, his broad understanding, his keen insight, and his general sense of fair play and true values impressed me greatly. He fought unflinchingly for the coaching profession, for its ideals, and for its objectives. Through the ATHLETIC JOURNAL, he brought coaches throughout the United States, an over-all picture of amateur athletics. In my opinion, this was one of the material factors that brought about the great increase in the popularity of our activities, and the development of the high-grade teams in all branches of sports."

K. L. "Tug" Wilson, Commissioner of Athletics, Big Ten Conference: "Not the least of the late Major John L. Griffith's numberless and far-reaching contributions to the cause of amateur athletics was the founding of the ATHLETIC JOURNAL twenty-five years ago. As a certain guide to the highest standards of technique and principle in sport, all of us who are, or have been coaches and athletic directors, are in its debt. And, as we are indebted to the ATHLETIC JOURNAL and wish it well, it is gratifying to look forward to a continued long history of its influence for immeasurable good."

William J. Bingham, Director of Athletics, Harvard University: "Sound intercollegiate athletic policy is based on mutual confidence, an appreciation of fundamentals, superior coaching, co-operation and enthusiasm. The late Major Griffith fostered these ideals, and he shared them with his athletic colleagues through the

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THE ATHLETIC JOURNAL

medium of the **ATHLETIC JOURNAL**. He likewise gave us the opportunity to express our views through the same channel. Our gratitude to the **ATHLETIC JOURNAL** for a quarter of a century of co-operative service."

Dana E. Morrison, President, The Bike Web Company: "We have been advertising in the **ATHLETIC JOURNAL** since 1922. Because the Journal has been among the leaders in the advancement of amateur athletics, we have always considered it a necessity to our advertising schedules."

L. B. Icely, President, Wilson Sporting Goods Company: "Congratulations on the 25th Anniversary of the **ATHLETIC JOURNAL**. We have been advertisers in your magazine since its inception, which shows you how high a value we place upon your medium for our interests in advertising."

Curtis W. McGraw, Vice President and Treasurer, McGraw-Hill Publishing Company: "Athletics, of course, have meant a lot to me and I have followed them fairly closely ever since I left college, which was the year the Journal was born. I know Major Griffith well. It seems to me that both the Major and the **ATHLETIC JOURNAL** have performed a most outstanding job for athletics in both schools and colleges, and the athletic fraternity is greatly in their debt."

T. H. Young, Director of Advertising, U. S. Rubber Company: "We would like to congratulate the **ATHLETIC JOURNAL** on its twenty-fifth anniversary. We started advertising in this publication in October, 1921. We considered its founder, the late Major John L. Griffith, one of our close, personal friends. His contributions, personally and through the **ATHLETIC JOURNAL**, were outstanding in the field of amateur athletics. We wish you continued success, attainment of the ideals set up by the founder."

Charles F. Robbins, President, A. G. Spalding & Bros., Inc.: "Our company has advertised in the **ATHLETIC JOURNAL**, both under the name of A. G. Spalding & Bros., and A. J. Reach, Wright & Ditson, since March of 1921, a period of nearly twenty-five years. In that time, we feel that the **Athletic Journal** has made a place for itself which is unique, and that it has performed a very valuable service for the athletic goods industry. At this time, as a firm which has provided schools and colleges with athletic equipment for seventy years, we offer our hearty congratulations and best wishes for your continuing success."

Hugo Goldsmith, MacGregor-Goldsmith Inc.: "Congratulations to the **ATHLETIC JOURNAL** at the end of its first quarter from MacGregor-Goldsmith nearing the end of its third quarter. For twenty-five years the **ATHLETIC JOURNAL** has reflected the high ideals of its founder, the late Major John L. Griffith, whose successful efforts, in placing collegiate sports on its present high level, will long be remem-

bered. To John L. Griffith, Jr., who now assumes guidance of the ATHLETIC JOURNAL, we wish the best of luck."

Floyd C. Treat, Sales Manager, The Wittich-Sheill Company: "Congratulations to the ATHLETIC JOURNAL on its quarter of a century of service and guidance to those in the field of interscholastic and intercollegiate athletics. The Journal's high ideals for amateur athletics will continue to receive our accord and support. Our products have been presented through the pages of the Journal since 1921. We consider it the best medium to advise coaches of changes and improvements in our products."

Here's What's New

A NEW, portable sports heater, seven by ten and one-half inches, weighing but four pounds, has been announced by the Sports Heater Co. One quart of kerosene or alcohol lasts twenty-four hours. The compact, lightweight heater is suitable as a heating unit for players on the bench at outdoor games, for spectators, and for numerous other cool weather outings. Details are available on request to the Athletic Journal, 6858 Glenwood Ave., Chicago, 26, Ill.

* * *

A TWENTY-ONE by seventeen-inch color poster, illustrating various handball techniques, and methods of contacting the ball on hop strokes, and listing eleven hints for better handball, is now available without charge on request to the Converse Rubber Company, 564 West Monroe Street, Chicago. The poster is suitable for mounting or bulletin board display. The hints for better handball emphasize placing the hands in warm water, before playing, to avoid soreness and bruising, proper warm-up methods, game improvement tips, etc. Illustrated shots include the sharp angle serve or placement to back corner, the ceiling crotch shot, hopping the ball, high sidewall lob serve, or placement, outside corner kills, and two-wall serve, or placement to back corner.

* * *

A NUMBER of baseball motion picture films in 16mm and 35 mm sizes, may be obtained on a loan basis from the American League of Professional Baseball Clubs, 310 South Michigan Avenue, Chicago, 4. Folders describing the films available may be obtained on request to Lew Fonseca, director of promotion. Coaches, and others desiring to show the films, must pay the original and return express charges only. There are no charges for use of the films. The films are *Inside Baseball*, 16mm; *World Series of 1943*, 16 and 35mm; *World Series of 1944*, 16 and 35mm; *World Series of 1945*, 16 and 35mm, and *Circling the Bases*, 16mm. The World Series films were produced in co-operation with A. G. Spalding & Bros., and Hillerich & Bradsby Co.

College Basketball

(Continued from page 44)

a basketball. The shoes had excellent soles, and the pure gum rubber employed is needed today. I have always insisted on the best in shoes, as a basketball player is useless with poor and ill fitting shoes. Those pre-war shoes we had are gone and now one judges the quality of shoes by the black mark which the player leaves on the floor.

In New England in the early 1900's, the game was a great success. The scores were around 50-45, about as they are now. About 1906, the game became a rough-house—holding, face-guarding, and pushing were prevalent—with the result that games went down to the ridiculous scores of 18-14, and even 9-8. It was a wrestling match, and if a player in high school or college scored five field goals, he made the headlines. A player could not use his skill, due to the rough tactics of his opponent. In Boston schools, the game was banned, and just last year the school authorities consented to allow the schools to play basketball once more.

Foul shooting was performed by only one man on a team, no matter who was fouled. This rule came in shortly after 1900, replacing the three-foul, one-opponent-point rule. Foul shooting was at first from twenty feet out. Since few fouls were converted into points, it was changed to fifteen feet. From the first, the underhand throw was the best for beginners, but professionals and the colleges started to throw foul baskets. Some players used the backboard, some shot clean. Now, the tendency is to use the one-handed shot. This is true on my squad, especially because I have a player who is a great shooter with one hand. I do not like one-hand shooting, but it is here, and here to stay. Players enjoy it, get fun from it, and the averages of baskets made is in their favor! The other night in a major game in the Boston Garden, one of my players threw in nine, one-handed free throw shots while 14,000 spectators looked on. The increase in one-handed shooting amazes me. And, the players seem to be able to shoot these one-handers better than they do the two-handers. Whether standing still or on the run, the one handers hit the target. High school players seem to favor the one handers. So, look for an increase in this method of scoring. I almost forgot to mention the most dangerous material thing in any gymnasium. Can you guess? Well, have you ever played in a gymnasium where there was a stove in one corner? Thirty years and more ago, there were several in this area. These stoves burned cord wood to heat the gymnasium. Rectangular in shape, the stove was in bounds, and, with a few four foot logs burning in it, was that stove hot! A player had to be smart not to get pushed

up against a hot stove, and held there. The floors have improved as the tempo of the game has increased. Here at Rhode Island State, in old Lippitt Hall, we played on an old oak flooring, with the result that the doctor was a daily five-thirty visitor to take out splinters—one, two and three inches in length—from where one usually sits. So, floors now are generally of maple or some other wood which does not splinter. The removable floors in all the big arenas are excellent.

I attended a charity game in New York City where six college teams from this great city played three games of fifteen minute halves. In one game, a certain college obtained an early lead of eight points. The other team then fell back, and refused to come out. This was before the ten-second rule, and since I was seated next to Dr. Naismith, the founder of the game, I learned a lot from him that night of his ideas of basketball. Generally a quiet man, he fumed and fumed, for he said time and again, "Why does that team stay back, why doesn't it come out, and try and get the ball?" He could not understand why a team behind did not attempt to go get the ball. After the game, a group of coaches discussed stalling with Dr. Naismith and Oswald Tower, until finally we were ejected from Madison Square Garden. So, stalling in the back court was the cause of the ten-second rule.

Offensively, the fast break, the single and double pivot, the basketball giant in the pivot, and, on defense, screening, are other gradual new developments.

Defensively, we have gone from the original method of picking up an opponent all over the floor, to the then five men retreating to the center of the floor to pick up their man, to the retreat nearer and nearer the defensive basket, until now we have all kinds of defenses ranging from the man-to-man, from the part man-to-man to the part zone, and the very many placements of the five men in zone defenses. So, a team must be prepared for them all. What fun it is to meet these various defenses. As long as a team lives up to the rules, I cannot see how we can legislate against any of these defenses. Originality is wonderful, so why curb it?

We are getting more uniform interpretation of the rules. We need more Class "A" officials, who should receive higher fees for their work. We must stop booing officials at college and school games, and, as coaches, we must remember that the team behind must be the aggressor. And so, the popularity of this game, called basketball, is bound to increase, and colleges and schools must build bigger gymnasiums with larger seating capacities.

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